51st Annual Meeting of EPOS

Current Challenges in Paediatric Ophthalmology Practice

September 24-26, 2026
Bucharest, Romania
Crowne Plaza Hotel

ABSTRACT BOOK

European Paediatric Ophthalmological Society

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Current Challenges in Paediatric Ophthalmology Practice

CONGRESS OVERVIEW
Date: September 24–26, 2026
Venue: Crowne Plaza Hotel, Bucharest, Romania

Contents

SCIENTIFIC PROGRAM

General Congress Format & Guidelines

Presentation Formats	• Keynote Lectures (10 min) • Oral Free Papers (8 min) • Rapid Fire Presentations (3 min)
Discussion Format	Combined Q&A panels will take place at the end of each session block, with the discussion time adjusted to ensure an efficient flow.
Poster Sessions	Scheduled coffee breaks will include structured, concurrent moderated poster viewing sessions led by designated session chairs in the designated poster area.

	DAY 1: Full Clinical Timeline – Friday, 25th September 2026
07:45 - 08:15	**REGISTRATION** Delegate Badging, Materials Pickup & Welcome Coffee
08:15 - 08:30	**OPENING CEREMONY**
08:15 - 08:20	Official Welcome Address by the Executive President and hosts
08:20 - 08:30	FEBOS-SP Results Announcement & Certifications Allowance to successful candidates
08:30-09:40	**SESSION I** (Part I) **Inherited Retinal Diseases (IRD): Phenotypic Diversity and Imaging Challenges** Moderators: **A. Dumitrescu** (United States), **M. P. Robert** (France)
08:30 - 08:40	Keynote Lecture L1 • What You Can't Afford to Miss in Pediatric Inherited Eye Disease Speaker: **A. Dumitrescu** (United States)
08:40 - 08:50	Keynote Lecture L2 • New Frontiers in Gene Therapy Speaker: **M. J. Gerhardt** (Germany)
08:50 - 09:00	Keynote Lecture L3 • Syndromic retinal dystrophies in children Speaker: **M. P. Robert** (France)

09:00 - 09:03	RF 1 • A Novel LRP5 Variant: Disruption of Retinal Angiogenesis with Preservation of Bone Mass Speaker: **A. Ćurić** (Croatia)
09:03 - 09:11	OP 1 • Variable Expression of BEST1 Mutation in a Family with Autosomal Dominant Vitreoretinochoroidopathy Speaker: **N. Voide** (Switzerland)
09:11 - 09:19	OP 2 • Maximizing Residual Vision in Stargardt Disease: Prisms and Biofeedback as a Rehabilitation Strategy Speaker: **I. A. Nemeș-Drăgan** (Romania)
09:19 - 09:22	RF 2 • Novel Xp22.13 duplication expanding the phenotypic and mutational spectrum of Nance-Horan Syndrome Speaker: **E. Giuliano** (Italy)
09:22 - 09:40	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
09:40 - 10:10	**SESSION I** (Part II) **Pediatric Retinal Pathologies: From Structural Anomalies to Emergency Interventions** Moderators: **S. Noval Martín** (Spain), **M. Bjeloš** (Croatia)
09:40 - 09:48	OP 3 • 30-Hz Flicker ERG in Children and Young Adults with Type 1 Diabetes Using a Portable ERG Device Speaker: **Š. Markelj** (Slovenia)
09:48 - 09:51	RF 3 • Systemic Everolimus Treatment of Retinal Hamartomas in a Child with Tuberous Sclerosis: Case Report Speaker: **M. Petrishka-Lozenska** (Sweden)
09:51 - 09:54	RF 4 • Bilateral Valsalva retinopathy in the sixteen-year-old patient Speaker: **A. Rzeszotarska** (Poland)
09:54 - 09:57	RF 5 • Clinical significance of foveal hypoplasia Speaker: **G. Milea** (Romania)
09:57 - 10:00	RF 6 • Pediatric Intravitreal Therapy: A 17-Year Tertiary Center Experience Speaker: **Ö. U. Fatihoğlu** (Turkey)
10:00 - 10:10	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
10:10 - 10:55	COFFEE BREAK I & REFRESHMENTS - In the Exhibition Hall
10:25 - 10:55	MODERATED POSTER VISITING - GROUP A - Guided poster presentations by the authors
10:55 – 11:50	**SESSION II** **Challenges in Pediatric Glaucoma: From Early Detection to Surgical Management** Moderators: **Y. El Sayed** (Egypt), **A. Serra Castanera** (Spain)
10:55 - 11:05	Keynote Lecture L4 • Unmasking Pediatric Glaucoma: Diagnostic Challenges in the Modern Era Speaker: **L. Ladea Degeratu** (Romania)

11:05 - 11:15	Keynote Lecture L5 • Navigating treatment options in pediatric glaucoma Speaker: **Y. El Sayed** (Egypt)
11:15 - 11:25	Keynote Lecture L6 • Glaucoma associated to systemic syndromes in children Speaker: **A. Serra Castanera** (Spain)
11:25 - 11:35	Keynote Lecture L7 • Secondary glaucoma after an early cataract operation - diagnosis and management Speaker: **M. Tekavčič Pompe** (Slovenia)
11:35 - 11:38	RF 7 • Significant Intraocular Pressure Reduction After Atrial Septal Defect Closure in Congenital Glaucoma Speaker: **I. Javokhir** (Uzbekistan)
11:38 - 11:50	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
11:50 – 12:40	**SESSION III** **Jubilee Session: Lifetime Achievement Awards** Chairs: **G. D. Hildebrand** (Switzerland), **M. P. Robert** (France)
11:50 - 11:55	Introduction of Professor Marie-Jose Tassignon by Göran Darius Hildebrand
11:55 - 12:10	**Academic Oration:** Pushing the boundaries of IOL implantation in paediatric cataract Speaker: **Prof. M. J. Tassignon** (Belgium)
12:10 - 12:15	Introduction of Professor John Marshall by Göran Darius Hildebrand
12:15 - 12:30	**Academic Oration:** A Lifetime spent trying to understand and improve the Lifetime of the Eye Speaker: **Prof. J. Marshall** (United Kingdom)
12:30 - 12:40	Jubilee Awards: Official Presentation of Congress Jubilee Medals and Distinctive Board Honors
12:40 - 13:40	**EPOS GENERAL ASSEMBLY** Official Business Meeting of EPOS Members
13:40 - 14:30	LUNCH BREAK I - Buffet Lunch, Networking & Exhibition Visits
14:30 – 14:55	**SESSION IV** **Emergencies in Pediatric Ophthalmology Practice - Uveitis** Moderators: **R. Amer** (Israel), **P. Delbeke** (Belgium)
14:30 - 14:40	Keynote Lecture L8 • The spectrum of pediatric uveitis Speaker: **R. Amer** (Israel)
14:40 - 14:43	RF 8 • Pediatric endogenous endophthalmitis: two original cases from a tertiary French center Speaker: **C. Roussel** (France)

14:43 - 14:46	RF 9 • Panophthalmitis Associated with Severe Vitamin A Deficiency in a Child with Autism Spectrum Disorder Speaker: **E. Protogerou** (Greece)
14:46 - 14:55	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
14:55 – 15:50	**SESSION V** (Part 1) **Pediatric Corneal and Ocular Surface in Focus** Moderators: **N. Ziakas** (Greece), **S. Biswas** (United Kingdom)
14:55 - 15:05	Keynote Lecture L9 • Reconstructing the Anterior Segment in Children Speaker: **S. Biswas** (United Kingdom)
15:05 - 15:15	Keynote Lecture L10 • Paediatric keratoplasty Speaker: **N. Ziakas** (Greece)
15:15 - 15:18	RF 10 • Bilateral Acorea with Microphthalmia and Non-recordable Visual Evoked Potential: Should We Operate? Speaker: **A. M. Khan** (Saudi Arabia)
15:18 - 15:21	RF 11 • The Unexpected Diagnosis Behind a Congenital Corneal Dermoid Speaker: **F. Teixeira** (Portugal)
15:21 - 15:29	OP 4 • Ocular GVHD in pediatric multivisceral transplantation Speaker: **S. Noval Martín** (Spain)
15:29 - 15:37	OP 5 • The Evaluation of Accelerated Corneal Cross-linking in Pediatric Keratoconus Speaker: **A. Kerimbaeva** (Turkey)
15:37 - 15:50	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
15:50 – 16:25	**SESSION V** (Part II) **Pediatric Corneal and Ocular Surface in Focus** Moderators: **D. Brémond-Gignac** (France), **H. Atilla** (Turkey)
15:50 - 16:00	Keynote Lecture L11 • New Treatments in Vernal Keratoconjunctivitis Speaker: **D. Brémond-Gignac** (France)
16:00 - 16:08	OP 6 • Dry eyes in children with monogenic ichtyosis: beyond the skin Speaker: **G. Marchione** (France)
16:08 - 16:11	RF 12 • When local becomes systemic: Blood tacrolimus levels with topical use in Vernal Keratoconjunctivitis Speaker: **T. Koren** (Israel)
16:11 - 16:14	RF 13 • Ophthalmologic Involvement in Pediatric Epidermolysis Bullosa: A Portuguese Cohort Speaker: **C. Costa** (Portugal)
16:14 - 16:20	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
16:20 - 16:55	COFFEE BREAK II & REFRESHMENTS - In the Exhibition Hall
16:25 - 16:55	MODERATED POSTER VISITING - GROUP B - Guided poster presentations by the authors

16:55 – 17:40	**SESSION VI** **Pediatric Cataract Surgery and IOL Outcomes - Functional Challenges** Moderators: **M. Tekavčič Pompe** (Slovenia), **M. J. Tassignon** (Belgium)
16:55 - 17:05	Keynote Lecture L12 • Building my BIL (bag-in-the-lens) experience over the last 10 years Speaker: **A. Ciubotaru** (Romania)
17:05 - 17:13	OP 7 • EPOS Observership Report: Pediatric Cataract Surgery - Experience from Antwerp and Brussels Speaker: **A. Waśkowska** (Poland)
17:13 - 17:21	OP 8 • Outcomes of Four-Point Gore-Tex-Assisted Scleral-Fixated Intraocular Lenses in Pediatric Aphakia Speaker: **A. M. Khan** (Saudi Arabia)
17:21 - 17:24	RF 14 • Hidden Curves: Case Series of Paediatric Posterior Lenticonus Speaker: **T. Liu** (United Kingdom)
17:24 - 17:27	RF 15 • Clinical Characteristics and Outcomes in Pediatric Cataract Surgery: Retrospective Analysis Speaker: **T. F. Sayin** (Turkey)
17:27 - 17:40	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
17:40	**DAY 1: SCIENTIFIC SESSIONS CONCLUDE**

DAY 2: Full Clinical Timeline – Saturday, 26th September 2026

08:00 - 08:30	**MORNING WELCOME** Welcome Coffee in the Exhibition Hall
08:30 – 09:00	**SESSION VII** **Pediatric Oculoplastics, Lacrimal Disorders, and Surgical Emergencies in Current Practice** Moderators: **D. Cioplean** (Romania), **R. Nițescu** (Romania)
08:30 - 08:33	RF 16 • The Critical Window: Diagnosis and Early Surgery in Three Pediatric Oculoplastic Emergencies Speaker: **I. A. Nemeș-Drăgan** (Romania)
08:33 - 08:36	RF 17 • The success rate of probing in CNLDO. When the insertion of silicone tube or DCR was needed Speaker: **R. Nițescu** (Romania)
08:36 - 08:39	RF 18 • Not Always What It Seems: Evaluating an Eyelid Lesion in a Young Infant Speaker: **D. Mostovoy** (Israel)
08:39 - 08:42	RF 19 • Paediatric Haemolacria: Diagnostic Challenges and Clinical Insights Speaker: **K. Rennie** (United Kingdom)
08:42 - 09:00	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty

09:00 – 09:50	**SESSION VIII-A** **ROP** (Part I)**: Modern Screening Frameworks and Treatment Dilemmas** Moderators: **N. Schalij-Delfos** (Netherlands), **C. Nițulescu (Romania)**
09:00 - 09:10	Keynote Lecture L13 • Evolution of Screening and Treatment of Retinopathy of Prematurity in the Cluj Center - 20 years of experience Speaker: **S. D. Nicoară** (Cluj-Napoca, Romania)
09:10 - 09:20	Keynote Lecture L14 • Saving vision in Retinopathy of Prematurity - Lessons from Romanian Experience Speaker: **C. Nițulescu** (Bucharest, Romania)
09:20 - 09:28	OP 9 • THESS-ROP Study: Development of a Prediction Model for Treatment-Requiring ROP in Greece Speaker: **S. Moutzouri** (Greece)
09:28 - 09:31	RF 20 • ROP in a Multiethnic UK Population: Impact of Ethnicity on Severity, Treatment and Discharge Speaker: **A. Di Domenico** (United Kingdom)
09:31 - 09:34	RF 21 • Refractive Errors in Preterm Infants with Treatment-Requiring ROP Speaker: **M. Kőszegi** (Hungary)
09:34 - 09:37	RF 22 • From treatment to refraction: long-term outcomes of treated ROP patients Speaker: **Y. Borella** (France)
09:37 - 09:50	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
09:50 – 10:35	**SESSION VIII-B** **ROP** (Part II)**: Pathophysiology, Biomarkers, and Early Predictors** Moderators: **S. D. Nicoară** (Romania), **A. Mataftsi** (Greece)
09:50 - 10:00	Keynote Lecture L15 • The role of the placenta in the development of retinopathy of prematurity (ROP) Speaker: **N. Schalij-Delfos** (Netherlands)
10:00 - 10:08	OP 10 • Fetal circulatory hypoxia as an early physiological predictor for Retinopathy of the Prematurity Speaker: **M. al Baaj** (Netherlands)
10:08 - 10:16	OP 11 • Early Prediction of Severe Retinopathy of Prematurity using Clinical and Physiological Data Speaker: **A. M. Arends-Tjiam** (Netherlands)
10:16 - 10:19	RF 23 • Dexamethasone eye drops and endogenous cortisol levels in infants with retinopathy of prematurity Speaker: **H. M. Öhnell** (Sweden)
10:19 - 10:35	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
10:35 - 11:20	COFFEE BREAK III & REFRESHMENTS - In the Exhibition Hall
10:50 - 11:20	MODERATED POSTER VISITING - GROUP C - Guided poster presentations by the authors

11:20 – 12:20	**SESSION IX** (Part 1) **Neuro-Ophthalmology: Diagnostic Conundrums in Pediatric Visual Loss** Moderators: **G. D. Hildebrand** (Switzerland), **O. Ehrt** (Germany)
11:20 - 11:30	Keynote Lecture L16 • The challenge of the baby that doesn't see Speaker: **E. Larsson** (Sweden)
11:30 - 11:40	Keynote Lecture L17 • Cerebrovascular dissections in children - can we predict them? Speaker: **G. D. Hildebrand** (Switzerland)
11:40 - 11:50	Keynote Lecture L18 • How blooms the morning glory optic disc anomaly Speaker: **C. Parsa** (Belgium)
11:50 - 11:58	OP 12 • How do glial precursors defects lead to optic disc anomalies in the papillorenal syndrome? Speaker: **R. Pascalau** (Romania)
11:58 - 12:06	OP 13 • Retinal phenotypes of NF2-related schwannomatosis in children Speaker: **P. Dubar** (France)
12:06 - 12:20	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
12:20 – 12:40	**SESSION IX** (Part II) **Neuro-Ophthalmology and Rare Pediatric Syndromes** Moderators: **E. Larsson** (Sweden), **G. Milea** (Romania)
12:20 - 12:23	RF 24 • Tadpole pupil in a child with congenital Horner syndrome and internal carotid artery agenesis Speaker: **A. Collins** (United Kingdom)
12:23 - 12:26	RF 25 • Clinical presentation of ACO2-related optic atrophy in children Speaker: **N. Bacq** (France)
12:26 - 12:29	RF 26 • Orthoptist-Led Paediatric Optic Disc Clinic for Suspected Disc Abnormalities Speaker: **M. Musadiq** (United Kingdom)
12:29 - 12:32	RF 27 • Infrared pupillometry using an OCT scanner in babies to assess anisocoria: a case report Speaker: **N. Tan** (United Kingdom)
12:32 - 12:40	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
12:40 – 13:20	**SESSION X** **Pediatric Ocular Oncology: Borderline Retinoblastoma and Treatment Toxicities** Moderators: **F. Munier** (Switzerland), **N. Voide** (Switzerland)
12:40 - 12:50	Keynote Lecture L19 • Diagnostic and therapeutic challenges posed by borderline states of retinoblastoma such as the diffuse infiltrating and anterior diffuse variants Speaker: **F. Munier** (Switzerland)
12:50 - 12:58	OP 14 • Clinical Outcomes of Retinoblastoma Treatment in Bucharest, Romania (2022-2025) Speaker: **C. Nițulescu** (Romania)

12:58 - 13:06	OP 15 • Pediatric cancer immunotherapy and ocular toxicity: a four-case series Speaker: **A. Rosati** (France)
13:06 - 13:09	RF 28 • Ophthalmological manifestations of CBL syndrome Speaker: **S. Guibaud** (France)
13:09 - 13:20	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
13:30 – 14:30	**INDUSTRY-SPONSORED SYMPOSIUM** Industry-Sponsored Symposia section
13:20 - 14:30	LUNCH BREAK II - Buffet Lunch, Networking & Exhibition Visits
14:30 – 15:00	**SESSION XI** **Evidence-Based Myopia Control: Spectacle Lenses and Pharmacological Strategies** Moderators: **A. Dahlmann-Noor** (United Kingdom), **D. Goicea** (Romania)
14:30 - 14:38	OP 16 • Effectiveness of DIMS Spectacle Lenses on Myopia Control in Romanian Children: 3-Year Results Speaker: **D. Goicea** (Romania)
14:38 - 14:46	OP 17 • Atropine and China's 2018 Myopia-Control Policies: Systematic Review and Policy-Era Appraisal Speaker: **M. Theologou** (Greece)
14:46 - 14:49	RF 29 • Effect of Systemic Diseases on Myopia Progression and Response to Myopia Control Spectacle Lenses Speaker: **B. Erdem Karakuş** (Turkey)
14:49 - 14:52	RF 30 • DIMS lenses vs 0.01% atropine in myopia control: 2-year RCT in Central European children Speaker: **E. Wnękowicz-Augustyn** (Poland)
14:52 - 15:00	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
15:00 – 16:10	**SESSION XII** **Systemic Diseases, Visual Development Deficits, and Multidisciplinary Care** Moderators: **R. Taylor** (United Kingdom), **O. Andrei** (Romania)
15:00 - 15:08	OP 18 • Phenotypic Spectrum and Systemic Associations of Microphthalmia: 25-Year Tertiary Center Experience Speaker: **S. Takil** (Turkey)
15:08 - 15:11	RF 31 • Ocular Manifestations in Fetal Alcohol Syndrome Disorders (FASD): Assessing the FASD Eye Code Speaker: **M. Andersson Grönlund** (Sweden)
15:11 - 15:14	RF 32 • Vision loss in children with avoidant-restrictive food intake disorder: a case series and survey Speaker: **A. Collins** (United Kingdom)
15:14 - 15:17	RF 33 • Visual perceptual deficits in Fetal Alcohol Syndrome: TVPS-4 findings Speaker: **S. Noval Martín** (Spain)

15:17 - 15:25	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
15:25 – 15:55	**INDUSTRY-SPONSORED SYMPOSIUM** Industry-Sponsored Symposia section
15:25 - 16:10	COFFEE BREAK IV & REFRESHMENTS - In the Exhibition Hall
15:40 - 16:10	MODERATED POSTER VISITING - GROUP D - Guided poster presentations by the authors
16:10 – 17:00	**SESSION XIII** **Amblyopia, Accommodative Disorders, and Vision Screening Challenges in Special Populations** Moderators: **S. Jain** (United Kingdom), **L. Teodorescu** (Romania)
16:10 - 16:18	OP 19 • Wandsworth Children's Eye Study: school-based multimodal assessment in a diverse urban population Speaker: **A. Dahlmann-Noor** (United Kingdom)
16:18 - 16:26	OP 20 • Ophthalmic screening in Down syndrome: Revised Best Practice Recommendations Speaker: **S. Jain** (United Kingdom)
16:26 - 16:29	RF 34 • Functional Spasm of the Near Reflex in Adolescents: A 3-Case Series Speaker: **H. Bouvarel** (France)
16:29 - 16:32	RF 35 • Pediatric Low Vision Rehabilitation in Moldova: Outcomes and Challenges Speaker: **T. Ghidirimschi** (Republic of Moldova)
16:32 - 16:35	RF 36 • Vision Screening in Disadvantaged Communities: Late Detection and New Care Pathways Speaker: **P. Domsa** (Hungary)
16:35 - 16:38	RF 37 • Is Amblyopia Truly Cured? Functional Outcomes After Perceptual Learning Speaker: **D. Grigoriu** (Romania)
16:38 - 16:41	RF 38 • Vision Screening Barriers in Children With Autism Spectrum Disorder Speaker: **E. N. Şahiner Vurgun** (Turkey)
16:41 - 17:00	**Sessional Q&A Panel:** Pooled Discussion & Audience Questions with Session Faculty
17:00 - 17:20	**CLOSING CEREMONY** Presentation of the Best Paper Awards and Travel Grants & Closing Remarks from the EPOS Board
17:20 - 17:30	**Handover Session from the Current to the Future EPOS President**
17:30	**CONGRESS CONCLUDES**

Posters Program

Scheduled coffee breaks will include structured, concurrent moderated poster viewing sessions led by designated session chairs in the designated poster area.

	DAY 1 • FRIDAY, 25th September 2026
10:25 - 10:55	RETINAL DISEASES and RETINOPATHY OF PREMATURITY – **GROUP A** *Moderators:* ***A. M. Arends-Tjiam*** *(Netherlands),* ***J. Rebić Jelić*** *(Serbia)*
P A01	PRISM: AI-Based Grading and Quantitative Decision Support for Retinopathy of Prematurity Screening J. Kubicek (Czech Republic)
P A02	Eye Micromovements and Stereoacuity in Children with and without Retinopathy of Prematurity I. Boichuk (Ukraine)
P A03	Bilateral Acute Macular Neuroretinopathy in a 13-Year-Old Boy Following Influenza A Infection B. Skulimowski (Poland)
P A04	Early Refractive Outcome in Extremely Premature Infants with or without ROP Treatment J. Rebić Jelić (Serbia)
P A05	Clinical Decision Assistance in Retinopathy of Prematurity via Retinal Imaging: Three Case Reports E. Anastasilaki (Greece)
P A06	Outpatient and Tele-consultation Activity for Amblyopia and ROP in England: A Ten-year Analysis R. Narendranath (United Kingdom)
P A07	Laser Pointer Retinopathy: Red vs Green Laser Lesions and the Challenge of Incidental Detection M. Bjeloš (Croatia)
P A08	Clinical and Ophthalmic Features of Stickler Syndrome: A Case Series G. Kostadinov (Bulgaria)
P A09	Listen to the Other Side too! A Multidisciplinary Diagnostic Journey Towards Revesz Syndrome S. Valeina (Latvia)
P A10	Multimodal imaging of transient macular edema associated with congenital retinal macrovessel Z. Tsani (United Kingdom)
P A11	Prognostic models for predicting sight-threatening ROP in preterm infants. A systematic review S. Moutzouri (Greece)
P A12	Sudden Vitreous Haemorrhage in Children: Two Unusual Aetiologies E. Wnękowicz-Augustyn (Poland)
P A13	Early manifestation of Stargardt disease K. Genov (Bulgaria)
P A14	Visual Outcome in Prematurely Born Children L. Bineva (Bulgaria)
P A15	First Successful Treatment of ROP with Intravitreal Aflibercept (Eylea) in Albania: A Case Report A. Tandili (Albania)
P A16	Unusual Bilateral Maculopathy with Good Vision. Case Report B. Coşoveanu (Romania)
P A17	Toxoplasma Retinochoroiditis Recurrence in the Fellow Eye - Case Report O. Andrei (Romania)
P A18	Post-Infectious Retinal Vascular Occlusion in an Adolescent: A Rare but Urgent Ophthalmic Pathology A. Ştirbu (Republic of Moldova)

P A19	Dexamethasone as a First-Line Treatment for Type 2 Retinopathy of Prematurity - 2,5 Years Follow Up J. Sundgren (Sweden)
P A20	Caregivers' Perspective on Newborn-Focused Screening for Retinopathy of Prematurity J. Sundgren (Sweden)
P A21	Late Peripheral Retinal Vascular Changes in Premature Infants M. Szwajkowska (Poland)

16:25 - 16:55	ANTERIOR SEGMENT DISEASES – **GROUP B** *Moderators:* ***A. Ciubotaru*** *(Romania),* ***D. Nowakowska*** *(Poland)*
P B22	Capsulotomy with supine Nd: YAG laser in children N. Klun (Slovenia)
P B23	Early genetic diagnosis of CHRDL1-related megalocornea in a child A. Marinčič (Slovenia)
P B24	Beyond the Obvious: Pediatric Iris Pseudometastasis and the Value of Multidisciplinary Collaboration L. Solecki (France)
P B25	Recurrent Corneal Epithelial Erosions as a Presenting Feature of Shprintzen-Goldberg Syndrome A. Mataftsi (Greece)
P B26	Clinical Characteristics and Outcomes of Pediatric Non-Infectious Anterior Uveitis M. Nieves Moreno (Spain)
P B27	Clinical Characteristic of Childhood Cataract in Bulgaria R. Dzhambazov (Bulgaria)
P B28	Secondary Glaucoma in Children with Peters Anomaly D. Vitanova (Bulgaria)
P B29	From Digital Exposure to Diagnosis: AI-Assisted Analysis in Pediatric Ocular Surface Dysfunction I. Grivova (Bulgaria)
P B30	Bullous Keratopathy Associated with Refractory Primary Congenital Glaucoma F. Teixeira (Portugal)
P B31	Management of a Unilateral Congenital Cataract Case Associated with Convergence Excess Esotropia A. Alaiba (Romania)
P B32	Paediatric Mitomycin C Intravascular Chemoembolization: A Case Series E. Carroll (United Kingdom)
P B33	Sturge-Weber Syndrome Case presentation A. Grigorescu (Romania)
P B34	Migratory Serpiginous Corneal Epitheliopathy - A Pediatric Clinical Case Report C. Hopinca (Romania)
P B35	Are we patching too much: the pitfalls of late onset diplopia A. Tandon (United Kingdom)

	DAY 2 • SATURDAY, 26th September 2026
10:50 - 11:20	NEURO-OPHTHALMOLOGY and OPHTHALMIC GENETICS – **GROUP C** *Moderators:* ***A. Grigorescu*** *(Romania),* ***S. Valeina*** *(Latvia)*
P C35	Septo-optic dysplasia - two clinical cases Y. Sharkova (Bulgaria)
P C36	OPA1: One Gene, Many Faces? Y. Vezenkova (Bulgaria)
P C37	Ocular Clues to a Rare Diagnosis: NF2-Related Schwannomatosis in a Child S. Duarte (Portugal)
P C38	Cryopyrin-Associated Periodic Syndrome: Papilledema Response to Canakinumab M. Dragomir (Romania)
P C39	Genetic Profile of Patients with Leber Congenital Amaurosis in Bulgaria S. Stoeva (Bulgaria)
P C40	Wolfram syndrome and Wolfram-like syndrome - two clinical cases Y. Bitolska (Bulgaria)
P C41	Interdisciplinary Perspectives on Convergence Insufficiency in Paediatric Acquired Brain Injury A. Carrasco Fernandez (Sweden)
P C42	Clinical and Genetic Profile of Syndromic Forms of Retinitis Pigmentosa in Bulgarian Patients Y. Kaneva (Bulgaria)
P C43	Oculomotor Palsy in an Infant as First Sign of an Ethmoido-Orbital Mass-Multidisciplinary Management C. Merticariu (Romania)
P C44	Intermittent Third Nerve Dysfunction in Childhood: Challenges in a Benign Appearing Condition K. Rennie (United Kingdom)
P C45	Gene Therapy Clinical Trials for Inherited Eye Diseases: The Pediatric Perspective L. Lamprogiannis (Greece)
P C46	Tolosa-Hunt Syndrome in Childhood: A Rare Cause of Painful Ophthalmoplegia A. Mendoni (Greece)
P C47	Novel Deep Intronic LRAT Variant in a 17-Year-Old patient with Retinal Dystrophy E. Avram (Romania)
P C48	Ophthalmological Initial Manifestations in Pediatric Onset Multiple Sclerosis, 2 Case Report O. Andrei (Romania)
P C49	Transient Horner Syndrome, Case Report O. Andrei (Romania)
P C50	Bartonella Henselae Neuroretinitis, Case Report O. Andrei (Romania)
P C51	Idiopathic Unilateral Oculomotor Nerve Palsy in an Adolescent Female J. Ibatov (Uzbekistan)
P C52	CEP290-associated Leber congenital amaurosis type 10 in pediatric patient: a case report F. Stoica (Romania)
P C53	Ganglion Cell Layer Stratification Artifact in Pediatric IIH Predicts Permanent Optic Nerve Damage G. Dotan (Israel)
P C54	Retinoblastoma in Latvia: A 25-Year Clinical and Genetic Analysis E. Radzina (Latvia)

15:40 - 16:10	MISCELLANEOUS – **GROUP D** *Moderators:* ***M. Dragomir*** *(Romania),* ***P. Domsa*** *(Hungary)*
P D55	Anticancer Drugs: Hidden Retinal Threats in Pediatric Oncology L. Solecki (France)
P D56	D.I.M.S. Lenses versus Overnight Ortho-K: 3 Year Outcomes - Which Slows More? S. Berkes (Hungary)
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ABSTRACTS

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Moderators: A. Dumitrescu (United States), M. P. Robert (France)

RF 1 • A Novel LRP5 Variant: Disruption of Retinal Angiogenesis with Preservation of Bone Mass

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Introduction: The aim was to describe the characteristics of a congenital rod–cone dystrophy caused by the heterozygous novel LRP5 c.4462A>G (p.Ser1488Gly) variant, and to integrate structural modelling with clinical data.

Case presentation: A female infant with congenital blindness underwent thorough ophthalmologic evaluation and genetic testing using an inherited retinal dystrophy panel. Fundus imaging demonstrated macular pseudocoloboma, and avascular peripheral retina. Optical coherence tomography revealed severe foveal outer retinal thinning. Electroretinography showed non-detectable responses. No systemic features were observed. Genetic analysis identified a heterozygous LRP5 c.4462A>G (p.Ser1488Gly) variant, absent from population databases and unreported in association with disease.

Discussion: In silico structural modelling of the wild-type and mutant LRP5 cytoplasmic domain was conducted using AlphaFold2. The altered residue lies within the fourth of five intracellular PPPSPxS motifs essential for phosphorylation-dependent Wnt/β-catenin signalling. Structural modelling predicted intact global folding but loss of a key phosphorylation site, potentially reducing Axin recruitment and impairing Norrin/LRP5-mediated retinal angiogenesis. Preserved bone health may reflect residual LRP5 activity and LRP6 compensation. To our knowledge, this is the first report of this novel variant, and presents a unique case because the father carrying the variant is healthy. We found justification for this unpredictable fact in the literature, which has shown that one parent can be completely healthy and carry the mutation.

Conclusions: This case expands the phenotypic spectrum of the disease, underscores the sensitivity of retinal vascular development to modest Wnt/Norrin deficits, and demonstrates the value of integrating phenotyping with molecular modelling for interpretation of variants of uncertain significance. By documenting such cases that are not fully understood at this time, we believe that we are contributing to a pool of knowledge that would possibly change the paradigm of how we perceive this gene today.

OP 1 • Variable Expression of BEST1 Mutation in a Family with Autosomal Dominant Vitreoretinochoroidopathy

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Introduction: Mutations in the BEST1 gene are associated with five clinically distinct inherited retinal degenerative disorders referred to as bestrophinopathies. These include Best vitelliform macular dystrophy (VMD), autosomal recessive bestrophinopathy, adult-onset VMD, autosomal dominant vitreoretinochoroidopathy, and retinitis pigmentosa. BEST1 encodes bestrophin-1, an integral transmembrane protein predominantly expressed in the RPE. Bestrophin-1 plays a key role in ion transport and in maintaining retinal homeostasis. Pathogenic variants in BEST1 can lead to a broad spectrum of phenotypic manifestations, ranging from isolated macular involvement to diffuse retinal degeneration with marked intrafamilial variability.

Case series: We report four affected individuals from three generations with a characteristic retinal phenotype consisting of a sharply demarcated mid-peripheral retinal boundary with peripheral vascular arrest confirmed by angiography and clumped hyperpigmentation, associated with megalopapillae, foveal hypoplasia and posterior staphyloma in the setting of moderate-to-high myopia.

The two oldest individuals presented with wheel-shaped subcapsular cataracts requiring surgery. These patients exhibited microcornea and shallow anterior chambers, but no nanophthalmos. Full-field, multifocal electroretinography, and visual evoked potentials were within normal limits, whereas EOG was abnormal and peripheral visual fields restricted in all affected individuals.

Phenotypic variability was observed within the family: the two youngest affected individuals did not exhibit high myopia, and one had no microcornea. The oldest affected individual developed multiple severe ocular complications, including glaucoma requiring repeated surgical interventions, intraocular lens subluxation, neovascular complications, retinal detachment, and corneal decompensation, ultimately leading to near blindness.

Genetic analysis identified a heterozygous BEST1 variant: c.256G>A p.(Val86Met) (rs121918289).

Conclusion: BEST1-associated disease is a continuous phenotypic spectrum, with overlapping phenotypes and marked intrafamilial variability. Some families show intermediate phenotypes combining features of ADVIRC and microcornea, rod-cone dystrophy, cataract, and posterior staphyloma (MRCS), supporting the concept of a continuous phenotypic spectrum associated with BEST1 mutations rather than fully distinct clinical entities.

OP 2 • Maximizing Residual Vision in Stargardt Disease: Prisms and Biofeedback as a Rehabilitation Strategy

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Objectives: To evaluate the effect of a combined Retimax VEP biofeedback and prismatic correction protocol on visual acuity, contrast sensitivity, and reading velocity in pediatric patients with confirmed Stargardt macular dystrophy.

Materials and methods: This prospective single-arm study included 11 eyes from pediatric patients (6 male, 5 female; age range 9–17 years, mean age 11.3 years) with genetically and imaging-confirmed Stargardt macular dystrophy (ABCA4 mutation, OCT, fundus autofluorescence). Nidek microperimetry identified the preferred retinal locus (PRL) to guide individualized prismatic correction. All patients completed 10 Retimax VEP biofeedback sessions (3 per week, 10 minutes each). BCVA (Snellen/ETDRS), contrast sensitivity (Pelli-Robson), and reading velocity (words per minute) were assessed at baseline, after 10 sessions, and at one month follow-up.

Results: Shapiro-Wilk testing confirmed non-normal distribution for BCVA and contrast sensitivity; Wilcoxon signed-rank tests were applied accordingly, while paired t-tests were used for normally distributed reading velocity. BCVA improved significantly from a mean of 0.095 at baseline to 0.180 after 10 sessions ($p=0.002$) and 0.168 at one month ($p=0.004$), with gains fully maintained at follow-up ($p=0.750$). Contrast sensitivity showed a positive trend from 1.364 at baseline to 1.523 at one month ($p=0.090$). Reading velocity improved from 15.1 to 18.0 words per minute after sessions but did not reach statistical significance ($p=0.362$).

Conclusions: A combined rehabilitation protocol using microperimetry-guided prismatic correction and Retimax VEP biofeedback produced highly significant and durable improvements in BCVA in pediatric Stargardt patients, with a positive trend in contrast sensitivity. The strong visual acuity response in this young cohort suggests a neuroplasticity advantage in pediatric patients. Larger controlled studies are warranted to confirm these findings and evaluate long-term outcomes.

RF 2 • Novel Xp22.13 Duplication Expanding the Phenotypic and Mutational Spectrum of Nance-Horan Syndrome

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Introduction: Nance-Horan syndrome (NHS) is a rare X-linked disorder caused by variants in the NHS gene on chromosome Xp22.13, characterized by complete congenital cataracts, dysmorphic facies, intellectual disability and dental anomalies. Most pathogenic variants reported so far are protein truncating mutations and large deletions of the NHS gene, while duplications at the NHS locus have been rarely described and never associated with a full syndromic presentation.

Case presentation: We report the case of a 10-year-old male patient, with right visually significant sutural cataract and left visually insignificant partial sutural cataract, bilateral microcornea, learning disabilities. Mother and grandmother had sutural cataracts, there was a family history of dental issues. NHS single-gene analysis identified a partial duplication of ~ 59.19 kb at Xp22.13 (17,651,407 – 17,710,597), involving exons 2 to 3, with breakpoints located in introns 1 and 3.

Discussion: Only two duplications involving the NHS locus have been previously reported, and none of them was associated with a conclusive Nance-Horan Syndrome phenotype. We report partial sutural cataracts with the right needing removal while the left was mild. In our patient a simple partial duplication limited to the NHS gene was found, together with a complete syndromic picture. This suggests that the rearrangement affects NHS dosage in a way that is comparable to loss-of-function variants but not enough to cause total bilateral congenital cataracts as is usually seen in this syndrome.

Conclusion: This case represents, to the best of our knowledge, the first description of Nance-Horan Syndrome caused by a simple partial duplication restricted to the NHS gene, expanding the mutational and phenotype spectrum of this rare disorder and suggesting that copy number gains should also be considered in the genetic workup of patients with suspected NHS.

OP 3 • 30-Hz Flicker ERG in Children and Young Adults with Type 1 Diabetes Using a Portable ERG Device

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Objective: The aim of this study was to compare 30-Hz flicker electroretinographic (ERG) responses between children and young adults with type 1 diabetes mellitus(T1DM) and healthy controls using a portable ERG device (RETeval). The 30-Hz flicker ERG primarily reflects cone-mediated retinal function. Previous studies in adults with diabetes have reported reduced flicker ERG amplitudes and prolonged implicit times with increasing severity of diabetic retinopathy.

Methods: A total of 67 children and young adults with T1DM were enrolled. The mean age of the T1DM group was 17.17±2.75years, with an age range of 11.8–23.6years. The mean duration of diabetes was 10.03±3.47 years, with a median of 9.79years and a range of 4.76–17.73years. The control group included 40 healthy subjects with a mean age of 17.19±3.69years and an age range of 10.2–23.8years. Participants with T1DM were classified as having no clinically detectable diabetic retinopathy or mild non-proliferative diabetic retinopathy (NPDR). 30-Hz flicker ERG responses were recorded under two retinal illuminance conditions, 16 and 32 Td·s. Flicker ERG amplitudes and implicit times were compared among healthy controls, patients with T1DM without diabetic retinopathy, and patients with mild NPDR.

Results: 30-Hz flicker ERG amplitudes differed significantly among the three groups, with the highest values in healthy controls and the lowest values in patients with mild NPDR. At 16 Td·s, mean amplitudes were 28.29 ± 6.18μV in healthy controls, 23.35 ± 6.39μV in patients with T1DM without diabetic retinopathy, and 19.24 ± 4.42μV in patients with mild NPDR. A similar pattern was observed at 32Td·s. Implicit times did not differ significantly among the groups.

Conclusions: Children and young adults with T1DM showed reduced 30-Hz flicker ERG amplitudes compared with healthy controls, including those without clinically detectable diabetic retinopathy. These findings suggest that reduced cone-mediated retinal function may be detectable before clinical signs of diabetic retinopathy are present.

RF 3 • Systemic Everolimus Treatment of Retinal Hamartomas in a Child with Tuberous Sclerosis: Case Report

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Introduction: Tuberous sclerosis complex (TSC) is an autosomal dominant disorder caused by mutations in the TSC1 or TSC2 genes, leading to dysregulation of the mammalian target of rapamycin (mTOR) pathway. Retinal astrocytic hamartomas are the most common ocular manifestation of TSC and may threaten visual function. The objective of this report was to evaluate the ophthalmological outcome of systemic everolimus treatment in a child with progressive retinal hamartomas.

Case presentation: A 6-year-old boy with genetically confirmed TSC and epilepsy was referred for evaluation of bilateral retinal lesions. Ophthalmological examination demonstrated multiple bilateral retinal hamartomas. In the right eye, a hamartoma was located superior to the optic disc, with preserved macular anatomy. The left eye showed a “morning glory”-like optic disc anomaly, temporal macular hamartomas, and hard exudates forming a macular star after macular oedema. Systemic everolimus therapy was initiated at 2.5 mg daily and adjusted according to growth, clinical response, and therapeutic blood levels. Follow-up included best-corrected visual acuity, orthoptic assessment, fundus examination, widefield retinal imaging, and optical coherence tomography (OCT).

Results/discussion: Regression of macular oedema and reduced exudation were observed in the left eye, together with stabilization of tumour growth bilaterally. Visual acuity remained stable in the right eye. Occlusion therapy improved best-corrected visual acuity in the amblyopic left eye and enhanced ocular alignment control. No severe adverse effects related to treatment were observed during follow-up.

Conclusions: Systemic everolimus was well tolerated and appeared to reduce retinal exudation and stabilize retinal hamartoma progression in this child with TSC. Further studies are required to evaluate long-term efficacy and safety in larger patient cohorts.

RF 4 • Bilateral Valsalva retinopathy in the sixteen-year-old patient

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Introduction: Valsalva retinopathy is defined as preretinal haemorrhage caused by the rupture of small superficial vessels in the macula secondary to the sudden increase in intrathoracic or intra-abdominal pressure. It is usually unilateral; however, in some cases, bilateral retinal changes may occur.

Case presentation: A sixteen-year-old male patient complained about decreased visual acuity in the left eye for about two months after excessive weightlifting at the gym. A few years earlier, the patient's mother was diagnosed with familial retinal arteriolar tortuosity (FRAT). Initially, the patient's best corrected visual acuity in the right and left eyes was 1,0 and 0,5, respectively. He reported metamorphopsia of the left eye in the Amsler grid test. Intraocular pressure was within normal. The anterior segment showed no abnormalities. Dilated fundus examination revealed bilateral sub-ILM haemorrhages in the macula of the right and left eye, as well as foveal abnormalities of the left eye. OCT, FA, haematological evaluation, and brain MRI were conducted. A wait-and-see approach was introduced. In follow-up, spontaneous resolution of fundus findings and improvement of visual acuity were observed.

Discussion: Valsalva retinopathy is usually reported in patients in their 20s or 30s and is secondary to increased intrathoracic or intra-abdominal pressure from coughing, vomiting, lifting, etc. Similar dilated fundus findings may be observed in other pathologies, such as Purtscher retinopathy or Terson’s syndrome. Also, given the patient's FRAT(+) familial history, a Valsalva-like mechanism was included in the differential diagnosis.

Conclusions: Despite a younger age, Valsalva retinopathy should be considered in the differential diagnosis of retinal haemorrhages in children and teenagers. Especially bilateral changes must be closely evaluated in order to exclude other potential, even life-threatening conditions.

RF 5 • Clinical significance of foveal hypoplasia

Georgiana Roxanda Milea, Daniela Eleonora Cioplean

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Introduction: Foveal hypoplasia is defined as the underdevelopment or absence of the foveal pit. It is associated with albinism, prematurity and PAX6 mutations, but can occur in isolated forms and expected to lead to lower VA and nystagmus. The development of the human fovea begins at 25 weeks of gestation and continues after birth with the specialisation of cones. However, there are no long-term studies regarding the clinical significance and visual improvements over time.

Materials and methods: We included in our study 55 patients diagnosed with foveal hypoplasia in OFTAPRO Ophthalmology Clinic between 2020 and 2026. The degree of FH was analysed based on OCT scans and graded using the Lancaster scale. During this interval we followed patients for changes in refractive status, VA, binocular vision and structural foveal changes.

Results: Of the 55 patients, 23 reported improvements in visual acuity either spontaneously or in association with occlusion therapy. The degree of improvement was directly correlated with the grade of foveal hypoplasia, but not necessarily a predictor of final VA. One of the patients with grade 4 FH had developed a vision of 20/25 Snellen by age 15. The most common refractive error associated with foveal hypoplasia was hyperopic astigmatism, followed by myopic astigmatism. Nystagmus was present in 26 of total cases and 9 of the cases with visual improvement. 40 patients had some form of strabismus, either esotropia, exotropia or dissociated deviations. Only 9 patients had achieved stereopsis.

Conclusions: Even though foveal hypoplasia can lead to lower VA, there are improvements over time, in some cases even to 20/20 vision. Foveal hypoplasia can occur in isolated forms more often than it was previously thought. The impact of foveal hypoplasia seems to be more strongly correlated to the development of binocular vision, rather than final VA outcome.

RF 6 • Pediatric Intravitreal Therapy: A 17-Year Tertiary Center Experience

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Objective: To evaluate the clinical indications, pharmacologic agents, and treatment burden of intravitreal injections in pediatric patients at a tertiary ophthalmology referral center. Materials and

Methods: This retrospective study reviewed all intravitreal injections performed between January 1, 2008, and November 30, 2025. Patients younger than 18 years at the time of injection were identified. Demographic and clinical variables, including diagnosis, laterality, injected agent, and number of injections, were analyzed. Pharmacologic agents were categorized as anti-vascular endothelial growth factor agents, intravitreal corticosteroids, or anti-infective agents/combinations. Dexamethasone phosphate administered as part of endophthalmitis combination therapy was analyzed within the anti-infective category.

Results: During the study period, 7,119 patients received 44,041 intravitreal injections. Pediatric patients accounted for 107 patients (1.50%) and 243 injections (0.55%). Complete data were available for 114 eyes of 93 patients, comprising 223 injections. The most common indications were retinopathy of prematurity (25.8%), Coats disease (23.7%), endophthalmitis (17.2%), and uveitis (16.1%). Anti-vascular endothelial growth factor agents accounted for 39.5% of injections, followed by dexamethasone implants (26.0%), anti-infective agents/combinations (20.2%), and triamcinolone acetonide (14.3%). The mean injection burden was lower in pediatric patients than in adults (2.27 vs. 6.25 injections per patient).

Discussion: Pediatric intravitreal therapy represented a rare but clinically heterogeneous component of intravitreal practice. Unlike adults, in whom repeated injections are usually driven by chronic retinal vascular diseases, pediatric indications were dominated by developmental, exudative, infectious, and inflammatory disorders.

Conclusions: Intravitreal injections were infrequently performed in children over this 17-year period. Despite diverse indications and pharmacologic agents, the overall treatment burden was substantially lower than in adults, highlighting the distinct clinical profile of pediatric intravitreal therapy.

SESSION II: Challenges in Pediatric Glaucoma: From Early Detection to Surgical Management

Moderators: Y. El Sayed (Egypt), A. Serra Castanera (Spain)

RF 7 • Significant Intraocular Pressure Reduction After Atrial Septal Defect Closure in Congenital Glaucoma

Ibatov Javokhir, Jamshid Mamatov, Indira Valieva

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Background: Secondary glaucoma due to elevated episcleral venous pressure (EVP) is well recognized in conditions such as arteriovenous fistulas or superior vena cava syndrome; however, its association with congenital heart disease remains unclear. We report a unique case of significant intraocular pressure (IOP) reduction following transcatheter closure of an atrial septal defect (ASD) in a child with refractory congenital glaucoma.

Case presentation: A 12-year-old girl with bilateral congenital glaucoma (right eye stage IIIb, left eye IVb) presented with persistently elevated IOP despite maximal topical therapy and multiple prior glaucoma surgeries (three in the right eye, two in the left). Baseline IOP was 27 mmHg (right eye) and 31 mmHg (left eye). She was also diagnosed with a secundum ASD (7–8 mm) with left-to-right shunt and underwent uneventful transcatheter closure. Postoperatively, without any change in glaucoma treatment, IOP decreased to 19 mmHg (right eye) and 20 mmHg (left eye), with stable follow-up and no complications.

Discussion: This marked bilateral reduction is unlikely attributable to perioperative factors alone. We hypothesize that ASD closure improved venous hemodynamics, reducing EVP and enhancing aqueous outflow. This mechanism is consistent with known EVP-related glaucoma conditions, where elevated venous pressure directly increases IOP.

Conclusion: This case highlights a previously unreported cardio-ophthalmic interaction. Systemic venous hypertension associated with cardiac shunts may contribute to glaucoma severity, and cardiac intervention may partially reverse this effect. Multidisciplinary evaluation should be considered in similar cases.

SESSION III: Jubilee Session: Lifetime Achievement Awards

Chairs: G. D. Hildebrand (Switzerland), M. P. Robert (France)

SESSION IV: Emergencies in Pediatric Ophthalmology Practice - Uveitis

Moderators: R. Amer (Israel), P. Delbeke (Belgium)

RF 8 • Pediatric Endogenous Endophthalmitis: Two Original Cases from a Tertiary French Center

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Introduction: Pediatric endogenous endophthalmitis is a rare ocular emergency (0.1 to 4% of endogenous cases) with severe visual outcomes and systemic mortality up to 30%. Misdiagnosis is frequent, especially in non-verbal children.

Case presentation: We report two cases managed at Necker-Enfants Malades Hospital, Paris. Case 1: an immunocompetent 13-year-old boy presented with prolonged fever and asthenia. Investigations revealed pneumococcal endocarditis (Streptococcus pneumoniae serotype 9N) with multiple septic emboli, from a sinusitis origin. Funduscopy and B-scan ultrasound identified bilateral endophthalmitis with dense vitritis. Treatment combined intravitreal vancomycin (4 OD, 3 OS), subconjunctival corticosteroids and systemic antibiotics. Right-eye pars plana vitrectomy with 360° retinectomy was required. Outcome was asymmetrical: phthisis bulbi OD, full recovery to 20/20 OS. Case 2: an 11-year-old non-verbal girl with genetic neurodevelopmental disability (TRAPCC6B mutation) was referred for suspected corneal abscess. Fever had been misdiagnosed as viral 48 hours earlier. B-scan ultrasound revealed posterior vitritis, and anterior chamber paracentesis identified Neisseria meningitidis serotype Y by PCR. Lumbar puncture confirmed concomitant meningitis, with positive blood cultures. Management combined three ceftazidime injections, daily subconjunctival corticosteroids, and intravenous cefotaxime for 14 days. Diabetes was incidentally diagnosed (HbA1c 13%), likely monogenic. Clinical evolution was favourable.

Discussion: Both pathogens are rarely reported in pediatric endogenous endophthalmitis. Bilateral pneumococcal involvement in a child with endocarditis has, to our knowledge, never been published. Neurodevelopmental disability as a factor compounding diagnostic delay in meningococcal endophthalmitis is also undocumented.4 In both cases, fundus examination and B-scan ultrasound established the diagnosis. The presumed corneal abscess in case 2 reflected the intraocular infection itself rather than primary keratitis, illustrating how endophthalmitis can mimic anterior segment disease.

Conclusions: Any unexplained ocular inflammation in a septic child warrants urgent ophthalmological assessment. Anterior chamber paracentesis should not be delayed, especially in non-verbal patients. Early multidisciplinary management conditions visual prognosis.

RF 9 • Panophthalmitis Associated with Severe Vitamin A Deficiency in a Child with Autism Spectrum Disorder

Eleni Protogerou[1], Dora Gianni[2], Carmen Vlant[3], Antigoni Roka[4], Maria Myrto Dourdouna[5], Ioanna Papadatou[6], Angeliki Moudaki[7], Vasiliki Spoulou[8], Nikolaos Papasyfakis[9]

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Introduction: Vitamin A deficiency is a rare but potentially devastating cause of severe ocular surface disease in developed countries. Advanced hypovitaminosis A may lead to keratomalacia, corneal melting, and permanent visual loss, particularly in children with neurodevelopmental disorders and restrictive dietary behaviour.

Case Presentation: An 8-year-old boy with autism spectrum disorder (ASD) and severe restrictive eating behavior presented with bilateral ocular inflammation, photophobia, blepharospasm, and progressive visual deterioration. Ophthalmologic examination revealed asymmetric severe ocular surface disease. The left eye demonstrated a central corneal ulcer with stromal infiltration and anterior segment inflammation, while the right eye showed advanced keratomalacia with extensive stromal thinning, ocular surface keratinization, and dense corneal opacification, raising concern for panophthalmitis. Orbital computed tomography revealed circumferential thickening and contrast enhancement of the ocular coats of the right globe, reduction of anterior chamber volume, conjunctival thickening, inflammatory changes of the preseptal soft tissues, and focal thickening of the right intraorbital optic nerve sheath, raising suspicion for endophthalmitis/panophthalmitis. Initial management consisted of intensive fortified topical antibiotics, cycloplegia, systemic antimicrobial treatment, intravitreal tap followed by intravitreal antibiotic injection, and surgical advancement of a superior conjunctival flap in the right eye to preserve ocular integrity. Biochemical evaluation demonstrated profound vitamin A deficiency, with serum retinol levels <0.02 mg/L. Following high-dose vitamin A supplementation and nutritional rehabilitation, progressive corneal re-epithelialization and reduction of ocular inflammation were observed.

Discussion: Severe hypovitaminosis A may mimic infectious keratitis or panophthalmitis, delaying diagnosis and treatment. Children with ASD and restrictive eating behavior represent a high-risk population for nutritional ocular surface disease.

Conclusions: Vitamin A deficiency should be considered in the differential diagnosis of severe keratitis, keratomalacia, and panophthalmitis-like presentations in pediatric patients with restrictive dietary behaviour and neurodevelopmental disorders.

RF 10 • Bilateral Acorea with Microphthalmia and Non-recordable Visual Evoked Potential: Should We Operate?

Abdullah M. Khan, Saleh AlMesfer, Khaled K. Abu-Amero

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Purpose: To report surgical and genetic findings in a 1-month-old male with bilateral acorea and microphthalmia caused by compound heterozygous FOXE3 mutations and to show that visual rehabilitation is achievable despite non-recordable flash VEP.

Methods: A 1-month-old male presented with bilateral microphthalmia, microcoria, and acorea. Comprehensive evaluation included slit-lamp examination, ultrasound biomicroscopy, B-scan, MRI, and flash visual evoked potential (VEP). Whole exome sequencing with parental confirmation was performed. Bilateral optical iridectomy, pupilloplasty, and anterior vitrectomy were undertaken to establish a functional visual axis.

Results: Imaging demonstrated preserved posterior segment anatomy despite non-recordable flash VEP. Genetic analysis identified compound heterozygous FOXE3 variants, including a novel likely pathogenic missense mutation and a known pathogenic nonsense variant, confirming autosomal recessive anterior segment dysgenesis. Surgical intervention successfully created a clear visual axis. At 2 years 5 months, the child demonstrated central fixation, smooth pursuit, and functional visual behaviour with aphakic correction. No major complications, including glaucoma or retinal detachment, were observed.

Conclusion: This case challenges the assumption that absent VEP predicts poor visual potential. When structural integrity is preserved, early surgical intervention can result in meaningful visual development. Optical iridectomy, combined with anterior segment reconstruction, offers a practical and effective strategy in complex congenital cases. This report expands the phenotypic spectrum of FOXE3-related disease and provides clinically actionable insight that supports early intervention—making it highly relevant for surgical decision-making.

RF 11 • The Unexpected Diagnosis Behind a Congenital Corneal Dermoid

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ULS Santa Maria, Portugal

Introduction: Epibulbar choristomas are congenital lesions composed of ectopic normal tissue, most commonly dermoids. Choristomas containing cerebral tissue are exceptionally rare and may clinically mimic more common lesions, posing diagnostic and management challenges.

Case Presentation: We report a full-term female newborn referred at birth for a right eye anterior segment anomaly detected on routine examination. Pregnancy and family history were unremarkable. Ophthalmologic evaluation revealed absence of pupillary light response in the right eye (OD), associated with a large inferotemporal corneal mass involving the visual axis, with suspected iridocorneal adhesion and obscuration of the pupil. Ocular ultrasound excluded posterior segment involvement. During follow-up, patient was unable to fixate or follow visual stimuli with OD, and the lesion demonstrated progressive enlargement, increasing corneal involvement, incomplete eyelid closure, and signs of ocular surface irritation. At 4 months of age, surgical excision was performed under general anaesthesia. Intraoperatively, a deep lesion with marked corneal thinning and descemetocele-like features, with protrusion of intraocular structures, was identified. Excision was completed with conjunctival advancement flap. Histopathological analysis revealed a choristoma composed of cerebral tissue.

Discussion: This case highlights a rare ocular surface choristoma with atypical depth and histological composition, initially suggestive of a dermoid. The diagnosis of cerebral tissue choristoma relies on histopathological confirmation. Early surgical intervention may be required in cases with visual axis involvement or structural compromise.

Conclusions: Congenital corneal cerebral choristoma is an exceptionally rare entity that may mimic a dermoid clinically. Recognition of atypical features and timely surgical management are essential to reduce the risk of visual deprivation.

OP 4 • Ocular GVHD in Pediatric Multivisceral Transplantation

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Objective: To determine whether there is a risk of ocular GVHD in pediatric multivisceral transplantation at the only center in Spain performing these procedures.

Materials and Methods: A retrospective analysis of medical records was conducted, including pediatric patients who underwent solid organ transplantation involving the intestine.

Results: Among 22 pediatric patients receiving intestinal-containing transplants that developed GVHD, four children suffered ocularGVHD. Clinical severity ranged from mild cases requiring topical treatment to severe complications necessitating corneal transplantation.

Discussion: While GVHD incidence is well characterized in allo-HSCT, these findings highlight that the risk is also significantly elevated in pediatric multivisceral transplantation. The presence of abundant donor lymphoid tissue likely contributes to this increased risk.

Conclusions: This is the first study to evaluate the incidence of ocular GVHD in pediatric multivisceral transplantation. The results underscore the need for standardized ophthalmologic screening and follow-up protocols from the time of transplantation to enable early diagnosis and management, potentially reducing long-term visual morbidity.

OP 5 • The Evaluation of Accelerated Corneal Cross-linking in Pediatric Keratoconus

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Purpose: To investigate the six-month visual, refractive, and tomographic outcomes of accelerated corneal collagen cross-linking (CXL) performed in children with keratoconus (KC) and to evaluate the rate of children classified as visually impaired after spectacle correction.

Material-Method: This retrospective study included children with KC who underwent accelerated CXL (10 min/9 mW/cm2). Best corrected visual acuity (BCVA), spherical equivalent (SE), astigmatism and corneal tomographic indices (steep simulated keratometry, central corneal thickness (CT), thinnest CT, keratoconus probability index, corneal high order aberrations including root mean square, spherical aberration, and coma were recorded at baseline and six months after CXL. The rate of children with BCVA 0,3 and below in the better eye were also noted for the assessment of 'visual impairment'.

Results: The mean age of 42 children (16 female and 26 male) with KC was 16.17 ± 1.81. Totally, 67 eyes underwent accelerated CXL. There were significant differences in terms of BCVA, SE, astigmatism between preoperative and 6 months after accelerated CXL (p: 0,01, p: 0,006, and p: 0,01, respectively). Corneal tomographic indices were not statistically different. The rate of children classified as 'visually impaired' was 21,4%.

Discussion: Six months after the accelerated CXL procedure, improvements were observed in mean spherical equivalent, astigmatism, and visual acuity. However, no statistically significant improvement was observed in corneal tomographic indices. Additionally, a relatively high proportion of children with 'visual impairment' was observed.

SESSION V (Part II): Pediatric Corneal and Ocular Surface in Focus

Moderators: D. Brémond-Gignac (France), H. Atilla (Turkey)

OP 6 • Dry Eyes in Children with Monogenic Ichtyosis: Beyond the Skin

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Introduction & Objective: Ichthyoses are mostly hereditary disorders marked by scaling, erythema, and hyperkeratosis. Several genes implicated in monogenic forms of ichthyosis encode proteins involved in ceramide and cholesterol metabolism. Beyond the classical consequences of ectropion on ocular surface, we have observed that many patients with monogenic ichthyosis, even with normal eyelid closure, exhibited ocular surface disease. We therefore systematically studied the ocular characteristic of such a population.

Material & Methods: Children with genetically proven ichthyosis and normal eyelid closure seen between September 2024 and September 2025 in our institution were included (ectropion being an exclusion criterion). The following parameters were assessed: visual acuity, slit lamp examination, tear film quality [tear break-up time, non-invasive break-up time (niBUT), Schirmer I test, interferometry], meibography (for children over 4 years of age).

Results: Fifteen children aged 5.68 ± 5.15 years were included. All patients had recessive forms of ichthyosis (CYP4F22 n=10; ST14 n=2; ALOX12B n=2; CERS3 n=1). No patient had received oral acitretin. They exhibited photophobia (8/15; 53%), ocular surface disease (13/15; 87%), and Meibomian gland dysfunction (4/5; 80%). Altered Meibography (absence of glands > 10%) was identified in 9/10 patients (90%). Tear film instability (niBUT < 6 seconds) was always present (6/6; 100%), with an average of 4.9 to 5.1 seconds. Aqueous deficiency (Schirmer ≤ 10 mm) was present in 2/7 patients (29%).

Discussion: Ocular surface disease appears to be common in ichthyosis, even when eyelid closure is normal. Disrupted ceramide metabolism likely affect eyelid tissues by promoting chronic inflammation of the Meibomian glands, leading to gland loss and tear film instability.

Conclusions: Ocular involvement may be underestimated in ichthyosis and early ophthalmologic evaluation is essential to prevent potentially sight-threatening complications. Personalized treatment should at least include ¬lubricating eye drops.

RF 12 • When Local Becomes Systemic: Blood Tacrolimus Levels with Topical Use in Vernal Keratoconjunctivitis

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Background: Vernal keratoconjunctivitis (VKC) is a chronic allergic ocular surface disease in children. Topical tacrolimus is widely used as a steroid-sparing agent and is generally considered to have minimal systemic absorption. Immune thrombocytopenic purpura (ITP) is a recognized adverse effect of systemic tacrolimus therapy; however, to date, it has not been reported in association with topical tacrolimus.

Objective: To report a case of elevated systemic tacrolimus concentrations associated with topical ocular ointment use and its potential clinical implications. Methods: Single case report with additional observational data from a small cohort of paediatric patients treated with the same topical tacrolimus ointment regimen.

Results: A 6-year-old boy with limbal VKC was treated with topical tacrolimus ointment 0.03% once daily for 2.5 years. He developed spontaneous bruising and was diagnosed with ITP, with platelet counts of 30-90*109/L. On 2 separate occasions, tacrolimus blood concentration approximately 2 hours after the application of the ointment was 4.4 and 14.6 ng/mL (therapeutic range of trough concentrations after systemic administration, 5.0–15.0 ng/mL). Discontinuation of topical tacrolimus led to non-detectable tacrolimus blood concentration but resulted in VKC exacerbation. Treatment was resumed with tacrolimus 0.06% eye drops combined with punctal occlusion, achieving disease control with peak tacrolimus blood concentrations below the level of quantification (<2.0 ng/mL) and a normalization of platelet count (160*109/L). Notably, in an additional cohort of 20 paediatric patients treated with the same topical tacrolimus ointment regimen, systemic tacrolimus levels were predominantly undetectable, underscoring the rarity of clinically significant systemic absorption.

Conclusions: Topical ocular tacrolimus ointment may, in rare cases, result in clinically significant systemic exposure in children. Strategies to reduce absorption, including use of ophthalmic formulations and punctal occlusion, should be considered during long-term treatment.

RF 13 • Ophthalmologic Involvement in Pediatric Epidermolysis Bullosa: A Portuguese Cohort

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Introduction: Inherited epidermolysis bullosa (EB) is a group of rare disorders characterized by extreme fragility of the skin and mucous membranes, leading to blistering, erosions, and scarring. Several subtypes have been described, including EB simplex, junctional EB, dystrophic EB, and Kindler EB. Ocular involvement is frequent, manifesting as corneal erosions, ulcers, and palpebral changes, which may result in irreversible visual impairment if not promptly and appropriately managed. This study aims to characterize the ocular manifestations of a pediatric Portuguese cohort.

Methods: Retrospective observational study that includes pediatric patients with confirmed diagnosis of EB and with ocular involvement, followed at a tertiary care center in Portugal. Clinical data was obtained from clinical records.

Results: Six patients were included (66% male, n=4), with a mean age of 4.6 ± 2.25 years and a mean follow-up of 42.8 ± 32 months. Most cases (83%, n=5) were dystrophic EB, of which 80% (n=4) were severe and 20% (n=1) intermediate; one patient had generalized EB simplex. Genetic analysis revealed COL7A1 mutations in 83% (n=5), predominantly with autosomal recessive inheritance, and a KRT5 mutation in one case. Ocular involvement was diverse: 66% (n=4) developed corneal ulcers, all of which progressed to leucomas; 33% (n=2) presented symblepharon; 16% (n=1) showed palpebral lesions; and 33% (n=2) reported photophobia. Two patients experienced significant reduced visual acuity secondary to corneal scarring. Supportive treatment with artificial tears was prescribed in all cases.

Conclusion: This cohort underscores the high frequency and severity of ocular involvement in patients with aggressive EB phenotypes, particularly dystrophic EB. Corneal complications, including ulcers and scarring, were predominant and carried a substantial risk of irreversible visual loss. These findings highlight the importance of systematic and early ophthalmologic assessment in all EB patients, especially those with severe subtypes, to allow timely interventions and mitigate long-term sequelae.

SESSION VI: Pediatric Cataract Surgery and IOL Outcomes - Functional Challenges

Moderators: M. Tekavčič Pompe (Slovenia), M. J. Tassignon (Belgium)

OP 7 • EPOS Observership Report: Pediatric Cataract Surgery – Experience from Antwerp and Brussels

Waśkowska Agnieszka

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Clinical observership was undertaken as part of the European Paediatric Ophthalmological Society Visiting Clinical Observership Grant Program. It provided the opportunity to gain hands-on insight into pediatric ophthalmology practice at leading tertiary centers in Antwerp and Brussels. The experience focused mainly on pediatric cataract surgery. It also facilitated the exchange of clinical approaches and strengthened international collaboration in pediatric ophthalmology.

OP 8 • Outcomes of Four-Point Gore-Tex–Assisted Scleral-Fixated Intraocular Lenses in Pediatric Aphakia

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Purpose: To evaluate visual outcomes, intraocular lens (IOL) stability, and safety profile of Gore-Tex–assisted four-point scleral-fixated intraocular lenses (SFIOL) in pediatric aphakic eyes.

Methods: This retrospective study included pediatric patients with aphakia who underwent four-point SFIOL implantation using Gore-Tex sutures at a tertiary referral center. Preoperative and postoperative data were collected, including best-corrected visual acuity (BCVA), intraocular pressure (IOP), axial length, and complications. Minimum follow-up was 6 months postoperatively.

Results: Seventeen pediatric eyes (mean age 9.06 ± 2.93 years; range 2–12 years) were included. Mean follow-up was 14.5 ± 13.4 months. Mean preoperative BCVA was 1.17 ± 0.45 logMAR, improving significantly to 0.70 ± 0.49 logMAR at final follow-up ($p < 0.001$). IOL centration remained stable in 100% of cases throughout follow-up. Early transient hypotony occurred in 41.2% of eyes and resolved spontaneously. Transient IOP elevation was observed in 17.6% and was medically controlled. One eye (5.9%) developed a prominent subconjunctival suture requiring pericardial grafting. No cases of suture exposure, IOL dislocation, retinal detachment, or endophthalmitis were observed.

Conclusion: Four-point Gore-Tex–assisted scleral-fixated intraocular lens implantation in pediatric aphakia provides significant and sustained visual improvement with excellent IOL stability. Although early transient postoperative events are relatively common, they are self-limited or medically manageable, and no sight-threatening complications were observed. These findings support Gore-Tex SFIOL as a safe and effective surgical option in pediatric eyes lacking capsular support.

RF 14 • Hidden Curves: Case Series of Paediatric Posterior Lenticonus

Tracie Liu, Vineeta Munshi, Anamika Tandon

Sheffield Children's NHS Foundation Trust, United Kingdom

Posterior lenticonus is a rare lens abnormality (estimated prevalence of 1 in 100,000) whereby a conical protrusion occurs in the lenticular capsule and cortex. The diagnosis is particularly of importance due to the associations of cataracts, significant refractive errors, strabismus and amblyopia in the paediatric population. This case series discusses the diagnosis and management of four paediatric cases managed at a tertiary care centre over a 10-year period.

We report four paediatric patients with age range between 2 months old to 7 years old at presentation. Key presenting features included leukocoria and reduced vision. Two patients were siblings of which both were identified to have bilateral changes and alteration of FYCO1 gene and variation of CRYGC gene. The remaining two cases had unilateral changes only. All were identified to have cataracts during the monitoring period of varying degrees. Diagnosis was supported by imaging in three cases either via ultrasound or anterior segment optical coherence tomography (OCT). Three patients received surgical intervention with lensectomy with or without lens implant, while one was managed conservatively with refractive correction only. Two surgically managed patients developed raised intraocular pressures during follow-up. Despite appropriate surgical, refractive, and amblyopia treatment, three of the four patients had residual amblyopia.

This case series highlights the variable presentations of posterior lenticonus and the potential to be amblyogenic secondary to refractive errors and visually significant cataract. Effective ophthalmic imaging can help diagnose these patients early and plan for timely intervention whether conservative or surgical. Management should be tailored to individuals and aim to reduce risk of amblyopia especially if presenting within the key years of visual development.

Posterior lenticonus has significant impact on visual potential in the paediatric population and should be considered in children presenting with unexplained visual impairment. Early recognition and management are essential to optimising visual outcomes.

RF 15 • Clinical Characteristics and Outcomes in Pediatric Cataract Surgery: Retrospective Analysis

Tuba Fesihe Sayin, Betul Ilkay Sezgin Akcay, Alev Kockar

Umraniye Egitim Ve Arastirma Hastanesi, Turkey

Purpose: To evaluate clinical and demographic features of pediatric cataract patients and analyze surgical techniques, IOL strategies, visual outcomes, complications, and corneal endothelial changes.

Methods: This retrospective study included 57 eyes of 38 children undergoing cataract surgery at Umraniye Training and Research Hospital (2021–2024). Demographic characteristics, cataract types, systemic diseases, surgical techniques, IOL implantation strategies were analyzed. Patients were stratified by age groups. Preoperative and postoperative (1st and 6th month) findings were compared. Evaluated parameters included best corrected visual acuity, refraction, intraocular pressure, axial length, anterior chamber depth, corneal endothelial parameters assessed by specular microscopy (including endothelial cell density and hexagonality).

Results: Primary IOL implantation was performed in 59.6% of eyes, 19.3% remained aphakic, and 21.1% underwent secondary IOL implantation. Systemic comorbidities were present in 47.4% of patients, most commonly microcephaly, and were more frequent in bilateral cases. The interval from examination to surgery was under one month across all age groups. Visual acuity improved early and remained stable at 6 months. A significant association was found between age and visual outcomes, with better results in older children. Postoperative refraction demonstrated a hyperopic shift with a tendency toward myopic shift over time. IOP remained stable, with early increases managed medically; antiglaucomatous therapy was more common in younger patients. Beyond visual outcomes, corneal endothelial parameters were evaluated alongside biometric measurements. This provides additional insight into the structural impact of pediatric cataract surgery, still limited in the literature. Early postoperative complications were inflammatory; late ones involved capsular opacification and amblyopia.

Conclusion: Visual outcomes after pediatric cataract surgery are associated with age, surgical timing, systemic conditions, and technique. Early diagnosis and prompt intervention are critical for preventing amblyopia. Corneal endothelial assessment with biometric analysis offers a more comprehensive understanding of surgical impact and may improve long term management.

Keywords: Pediatric cataract, Cataract surgery

DAY 2: Full Clinical Timeline – Saturday, 26th September 2026

SESSION VII: Pediatric Oculoplastics, Lacrimal Disorders, and Surgical Emergencies in Current Practice

Moderators: D. Cioplean (Romania), R. L. Nițescu (Romania)

RF 16 • The Critical Window: Diagnosis and Early Surgery in Three Pediatric Oculoplastic Emergencies

Iulia Andrada Nemeș-Drăgan

UMF Iuliu Hatieganu, Cluj-Napoca, Romania

Introduction: Pediatric oculoplastic conditions can lead to permanent functional impairment if not recognized and treated promptly. We present three cases — traumatic, autoimmune, and infectious — in which early diagnosis and timely surgical intervention were decisive.

Case Presentations

Case 1: A 2-year-old male presented two days after inferior eyelid trauma with a metal hanger. Examination revealed complete inferior canalicular transection, reconstructed with a Masterka silicone tube. Epiphora resolved within two days postoperatively.

Case 2: A 19-month-old male had a 5-month history of bilateral purulent discharge unresponsive to local treatment. He developed photophobia from corneal ulceration secondary to cicatricial entropion, with perioral skin and oral mucosal lesions. Direct immunofluorescence of a perilesional biopsy confirmed Linear IgA Dermatosis. Dapsone was initiated and bilateral tarsal wedge resection performed, with clinical improvement.

Case 3: A 17-year-old female presented with bilateral severe blepharitis and right lower eyelid ectropion. Biopsy of the eyelid margin identified coinfection with Enterococcus faecalis and Demodex folliculitis. Lateral tarsal strip was performed alongside targeted medical treatment, with stable eyelid position at follow-up.

Discussion: These cases span a wide etiological spectrum — trauma, autoimmune disease, and mixed infection — each requiring a distinct diagnostic approach and early surgical decision. Canalicular injuries demand urgent microsurgical repair; cicatricial entropion in rare dermatoses requires multidisciplinary management; infectious ectropion necessitates microbiological workup before definitive surgery.

Conclusions: In pediatric oculoplastic disease, early recognition and prompt intervention are essential to prevent irreversible ocular damage. These cases reinforce the need for clinical vigilance, interdisciplinary collaboration, and timely surgical management in children.

RF 17 • The Success Rate of Probing in CNLDO. When the Insertion of Silicone Tube or DCR was Needed

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Objective: To evaluate the efficacy of nasolacrimal duct probing in children with congenital nasolacrimal duct obstruction (CNLDO) and the need for silicone tube insertion or DCR.

Methods: This retrospective analysis evaluated 79 children who underwent treatment for CNLDO between 2021 and 2025 in a private clinic, Oftapro medical center. The average post-operative monitoring period was 44 months. Treatment outcomes were verified during follow-up visits using patient clinical histories regarding tearing and in the office examining the lacrimal meniscus height and the presence of regurgitation on pressure over the lacrimal sac.

Results: The study evaluated 79 patients, with CNLDO, 10 of them were previously operated in other clinics. A single probing procedure was performed on 59 patients with o success rate of 88,74%, while 7 patients, 11,26% required another procedure. Insertion of bicanalicular Ritleng silicone tube was done for 10 older patients and for 17 consecutive patients with a success rate of 97% except for 1 patients that need DCR.

Conclusion: Probing remains a highly effective and standard approach for treating CNLDO in young children. Silicone tube intubation is a successful option for older patients and for revisions, especially if there are false passages or history of dacriocistitis. DCR in indicated in cases where the silicone tube couldn't be placed.

Keywords: congenital nasolacrimal duct obstruction; lacrimal duct probing; silicone tube, DCR

RF 18 • Not Always What It Seems: Evaluating an Eyelid Lesion in a Young Infant

Mostovoy Dina

Private Practice Modiin, Israel

Introduction: Eyelid lesions in young infants can be deceptively common in appearance, often mimicking more frequent entities such as hemangioma, and may obscure rare diagnoses that require timely recognition. Juvenile xanthogranuloma (JXG) is a rare, benign, non-Langerhans cell histiocytic disorder that can involve the eyelid. Early recognition is essential to avoid unnecessary or invasive interventions. This report aims to illustrate the diagnostic process, highlight the potential for misdiagnosis, and describe successful non-surgical management of an atypical eyelid lesion in a four-week-old infant.

Methods: A four-week-old infant presented with a solitary eyelid lesion initially suspected to be a hemangioma. Ultrasonography demonstrated a solid, nonspecific subcutaneous mass, and subsequent magnetic resonance imaging (MRI) suggested an inflammatory rather than vascular lesion. Given the diagnostic uncertainty, a biopsy was performed for histopathological confirmation. Based on the diagnosis, the patient was treated with intralesional corticosteroid injections instead of surgical excision. Clinical and imaging follow-up was performed to monitor lesion regression and assess for recurrence or systemic involvement.

Results: Histopathologic examination confirmed juvenile xanthogranuloma. Following intralesional corticosteroid therapy, the lesion gradually regressed and eventually resolved completely without scarring or recurrence. No ocular or systemic involvement was observed during follow-up, and the infant achieved excellent cosmetic and functional outcomes.

Conclusions: This case emphasizes the diagnostic complexity of periocular lesions in early infancy and underscores the importance of considering rare entities such as JXG when evaluating eyelid masses that resemble hemangioma. A systematic approach involving stepwise imaging and histopathologic confirmation enables accurate diagnosis. Intralesional corticosteroid therapy offers a safe, effective, and minimally invasive treatment option, avoiding surgery while achieving optimal cosmetic and functional results.

RF 19 • Paediatric Haemolacria: Diagnostic Challenges and Clinical Insights

Katherine Rennie, Selina Tomlinson

Royal United Hospital, Bath, United Kingdom

Background: Haemolacria is a rare and often alarming presentation. Causes range from benign self-limiting conditions to structural, vascular, or systemic disease. Because of its rarity, the diagnostic pathway is not well defined, and published paediatric cases remain limited.

Case Presentation: We report the case of a 12-year-old girl with a three-week history of intermittent spontaneous bleeding from the right eye, later becoming bilateral. Examinations revealed no trauma, foreign body, conjunctival pathology, or identifiable bleeding source. The bleeding was observed multiple times, including directly from the punctum. Early differential diagnoses included adenoviral conjunctivitis and subconjunctival haemorrhage. As symptoms persisted, further evaluation was undertaken to exclude structural, vascular, and systemic causes. CT imaging of the orbits and nasolacrimal system demonstrated no pathology. Paediatric assessment and laboratory investigations found no evidence of a coagulation disorder. With sinister causes excluded, a diagnosis of benign idiopathic haemolacria was made. Symptoms gradually improved, and the patient remained well without recurrence.

Discussion: This case illustrates challenges posed by haemolacria in children. Although benign and self-limited causes are common, structural, vascular, and systemic pathology must be carefully excluded. In this patient, a thorough examination, targeted imaging, and paediatric assessment with laboratory investigations were essential in ruling out serious underlying disease. The absence of trauma, conjunctival pathology, lesions, vascular anomalies, or coagulopathy supported a diagnosis of benign idiopathic haemolacria. The gradual resolution of symptoms further reinforces the self-limiting nature of this condition in many paediatric cases. This case adds to limited literature and highlights the importance of a structured yet proportionate approach to investigation.

Conclusion: Once concerning causes have been excluded, clinicians can diagnose benign idiopathic haemolacria and provide reassurance to families. This case supports conservative management in children with normal examinations and investigations, emphasising that extensive testing is not always required when clinical findings are reassuring.

SESSION VIII-A: ROP (Part I): Modern Screening Frameworks and Treatment Dilemmas

Moderators: N. Schalij-Delfos (Netherlands), C. Nițulescu (Romania)

OP 9 • THESS-ROP Study: Development of a Prediction Model for Treatment-Requiring ROP in Greece

Stella Moutzouri, Anna-Bettina Haidich, Maria Lithoxopoulou, Georgios Pappas, Christos Tsakalidis, Nikolaos Ziakas, Asimina Mataftsi

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Objective of the study: To develop THESS-ROP, a novel prediction model for treatment-requiring retinopathy of prematurity (TR-ROP) and compare its performance with four established models in a cohort of screened preterm infants in Thessaloniki, Greece.

Materials and methods: This ambispective cohort study included all infants screened for ROP between 2016 and 2022 at 2nd Neonatology Department of Aristotle University of Thessaloniki, a tertiary neonatal intensive care unit in Greece. The primary outcome was TR-ROP. A multivariable penalized ridge logistic regression model was developed using gestational age, birth weight, history of sepsis, and hydrocephalus up to four weeks postnatal age. Missing data were addressed using 10-fold multiple imputation. Internal validation was performed using bootstrap resampling with optimism correction. External validation of four models (CO-ROP, G-ROP, G-ROP 180g, and ROPScore) was performed in the same cohort. Performance was assessed using area under the curve (AUC), sensitivity, specificity, positive predictive value, and negative predictive value.

Results: Among 526 screened infants, 29 (5.5%) required treatment. THESS-ROP model demonstrated excellent discrimination (optimism-corrected AUC 0.946, 95%CI (0.920–0.972), high pooled sensitivity (97.9%, 95%CI, 87.2%–100.0%) and pooled specificity of 76.0%. In external validation, CO-ROP, G-ROP, G-ROP 180g, and ROPScore achieved pooled sensitivities of 92.8%, 99.3%, 99.3%, and 100.0% and corresponding specificities of 62.9%, 34.1%, 25.9%, and 61.5% respectively.

Discussion: Incorporation of systemic comorbidities improved prediction accuracy and screening efficiency compared with weight-gain–based models alone. The higher specificity of THESS-ROP may reduce unnecessary ophthalmologic examinations while maintaining high sensitivity for TR-ROP detection.

Conclusion: THESS-ROP prediction model incorporating systemic comorbidities accurately identified infants at risk for TR-ROP and demonstrated improved screening efficiency compared with established prediction models in our cohort. External validation in independent populations is warranted prior to clinical implementation.

RF 20 • ROP in a Multiethnic UK Population: Impact of Ethnicity on Severity, Treatment and Discharge

Alice Di Domenico

Birmingham Women's and Children's Hospital Trust, United Kingdom

Objective of the study: Low gestational age (GA) and birth weight (BW) are well-established risk factors for retinopathy of prematurity (ROP); the role of ethnicity remains uncertain. The diverse population of the West Midlands region in the United Kingdom provides a unique opportunity to explore the impact of ethnicity on ROP.

Materials and methods: 346 infants screened for ROP over three years at Birmingham Women's Hospital were studied retrospectively. Data collected included ethnicity, birth weight, gestational age at birth, corrected gestational age (CGA) at maximum ROP stage and at discharge, maximum ROP stage, and need for treatment. Multivariable regression analysis was performed adjusting for GA and BW.

Results: Five ethnic groups were studied: White (40.8%), Asian (33.5%), Black (18.4%), Mixed White and Black (4.8%), Mixed White and Asian (2.4%). After adjustment for GA and BW, no significant differences were observed across ethnic groups for CGA at ROP onset (p=0.607), CGA at maximum stage (p=0.944), maximum ROP stage (p=0.300), CGA at treatment (p=0.107), treatment requirement (p=0.086), and CGA at discharge (p=0.984). Although a higher proportion of White infants required treatment (13.3%) compared to Asian (7.2%) and Black (6.6%), statistical significance was not reached.

Discussion: Earlier studies suggested that Black ethnicity may protect against ROP, while Asian children may have lower incidence of treatment compared to Caucasians. Inter-ethnic variation in treatment requiring ROP is suggested, but did not reach statistical significance in this cohort. Advances in neonatal care may have resulted in more uniform outcomes across ethnic groups.

Conclusions: Ethnicity does not appear to independently influence disease severity or follow-up duration in our study. A larger cohort is required to conclude impact of ethnicity.

RF 21 • Refractive Errors in Preterm Infants with Treatment-Requiring ROP

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[2] Semmelweis University, Hungary

Objective of the study: To analyse refractive errors in preterm infants with treatment-requiring retinopathy of prematurity (ROP).

Materials and methods: In this retrospective study, we analysed data of 216 preterm infants. Refractive error (spherical equivalent, SE) and corneal power (K) were measured using a handheld kerato-refractometer (Retinomax K-plus 3 or K+screen, Righton Ophthalmic Instruments) under general anaesthesia at the time of retinal laser treatment. We performed non-parametric tests to compare the parameters of eyes treated for ROP. Regression analysis was used to evaluate the association between ophthalmic parameters and gestational age at birth and at the time of treatment.

Results: Mean SE was −1.56 ± 3.92 D (range: −14.5 to 7.63), and mean K was 54.75 ± 3.8 D (range: 41.70–65.41). Birth weight showed a significant positive correlation with SE and a significant negative correlation with K. Gestational age was also positively correlated with SE and negatively correlated with K.

Conclusions: Refractive error is influenced by the gestational age at the time of the treatment and the extent of retinal vascularization.

RF 22 • From Treatment to Refraction: Long-Term Outcomes of Treated ROP Patients

Borella Ysé, Giulia Marchione, Dominique Brémond-Gignac, Alejandra Daruich

Necker Children Hospital, France

Introduction: Retinopathy of prematurity (ROP) is a known risk factor for myopia, further exacerbated by its treatments (laser, anti-VEGF, vitrectomy). This study investigates prevalence of myopia in treated ROP and its progression in the first years of age.

Methods: Preterm infants treated for type 1 ROP or persistent avascular zone 3 within their first year of life (laser or anti-VEGF injection) at our tertiary center were included. Collected data comprised clinical data and cycloplegic refraction during follow-up.

Results: A total of 148 premature infants (mean birth weight of 713±154 g; mean gestational age 25.2±1.5 weeks PMA) were enrolled. Treatment was required at a mean age of 45.1±16.6 weeks PMA, with laser being the most frequently performed (81.4%). Refraction was available for 100, 46, 30 and 14 eyes at 1, 2, 3 and 4 years respectively. Mean diopters values at one year of age were -3.9 (+/-2.9) in patients treated with laser for ROP type 1, -1.0 (+/-0.5) D in patients treated by laser for persistent avascular zones and -2.1 (+/-2.2) D in patients primarily treated with anti-VEGF. In myopic patients by age one year old (36,7%), myopia progressed by -1.1D between 1 and 2 years old and was stable between 2 and 3 years old.

Conclusions: Here we provide a longitudinal assessment of refractive outcomes up to 4 years in a European population, showing mostly mild myopia and a mild myopic progression in treated preterm infants, especially when laser is performed for persistent avascular zones.

SESSION VIII-B: ROP (Part II): Pathophysiology, Biomarkers, and Early Predictors

Moderators: S. D. Nicoară (Romania), A. Mataftsi (Greece)

OP 10 • Fetal Circulatory Hypoxia as an Early Physiological Predictor for Retinopathy of the Prematurity

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Background: Data indicate that placental abnormalities may be implicated in the pathogenesis of retinopathy of prematurity (ROP), a major cause of childhood blindness. This study investigates the contribution of fetal hypoxia in the development of ROP.

Methods: This pilot study included 91 preterm neonates eligible for ROP screening (born <30 weeks of gestational age (GA) and with a birthweight (BW) <1250 grams or born 30-32 weeks of GA and/or with a BW 1250-1500g with an established risk factor) and born or transferred to the Neonatal Intensive Care Unit at Leiden University Medical Centre (2018–2022). Clinical data were retrospectively extracted from electronic health records, and placental tissue samples were histologically re-examined conform the Amsterdam Placental Workshop Group Consensus Statement. The primary outcome was the development of ROP. Multivariate regression analyses were performed to adjust for potential confounders.

Results: Fetal hypoxia was significantly associated with any stage ROP with a p-value of 0.009. In the multivariate models adjusted for GA, significant associations were still found between fetal hypoxia and any-stage ROP (OR = 6.8; 95% CI, 1.6-29.3), p-value 0.01.

Conclusion: This pilot study introduces fetal hypoxia as a potential risk factor for the development of any stage ROP, emphasizing the interaction between prenatal and postnatal determinants of disease. These findings indicate that the pathogenesis of ROP is influenced, in part, by intrauterine conditions, underscoring the importance of early identification of prenatal risk factors.

OP 11 • Early Prediction of Severe Retinopathy of Prematurity using Clinical and Physiological Data

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Purpose: To develop a prediction model for severe retinopathy of prematurity (ROP) by integrating clinical risk factors and continuous physiological data collected during phase 1 of ROP development.

Methods: Preterm infants screened for ROP at Erasmus University Medical Center Rotterdam between 2018 and 2023 were eligible. Severe ROP was defined as type 1 or 2 ROP, treated ROP, or ROP with pre-plus disease. Clinical and physiological data from birth to 32 weeks post-menstrual age were collected and summarized within 12-hour timeframes. Machine learning classification models were developed, and evaluated with five-fold cross-validation. Performance metrics include area under the receiver operating curve (AUROC), sensitivity and specificity.

Results: Of 377 screened infants, 78% (n=295) had any stage ROP and 22% (n=82) had severe ROP. After removing highly correlated variables, physiological data alone yielded a maximum AUROC of 0.79, using mean fraction inspired oxygen and oxygen saturation. Adding clinical data resulted in a mean cross-validated AUROC of 0.85, 81% sensitivity and 74% specificity. Top predictors included gestational age, small for gestational age, several neonatal morbidities (intraventricular haemorrhage, necrotizing enterocolitis) and treatments (transfusions, steroids, inotropics, mechanical ventilation), maternal factors (hypertension, diabetes, fever, steroids and preterm pre-labor rupture of membranes), and skewness of heart rate and perfusion index.

Conclusions: Continuous physiological data showed moderate predictive value for severe ROP, with model performance improving when clinical data was added. Adjusting data summarization methods for continuous data might improve performance. Further evaluation of the data should also explore time-to-event modelling.

RF 23 • Dexamethasone Eye Drops and Endogenous Cortisol Levels in Infants with Retinopathy of Prematurity

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Objective: To investigate the systemic uptake of dexamethasone eye drops used to treat retinopathy of prematurity (ROP) and its effect on endogenous cortisol production.

Materials and methods: Infants with type 2 ROP treated with dexamethasone eye drops (1mg/ml), admitted to Skåne University Hospital or Sahlgrenska University Hospital, were eligible. Exclusion criteria included use of systemic steroids within the preceding two weeks and the presence of ocular infection. Blood samples were collected according to a predefined optimized sampling scheme.

Results: Eleven infants were included. Their median gestational age was 26 weeks (range 23-28). After the first drop, dexamethasone could be detected in the serum of all infants. The median Cmax was 1.30 nmol/L (range 0.90–4.82) and Tmax occurred at a median of 2.3 hours (range 0.28–5.42). The maximum number of drops per day ranged from 1 to 8 during follow-up. In predose samples, dexamethasone was detectable in only a few infants; one receiving frequent dosing of up to four drops daily in both eyes, and another infant where one sample seemed to be postdose by mistake. A decline in serum cortisol levels was noted after administration of the drops with a median nadir after 12 hours (range 5–18). Median endogenous cortisol was 49.7 nmol/L before treatment initiation and ranged between 26.0 and 51.4 nmol/L on day 3 of treatment (pre-dose). Levels remained similar throughout treatment, suggesting no long-term cortisol suppression associated with the therapy.

Discussion: Ocular concentrations are likely higher and systemic absorption lower in preterm infants due to their lower tear production, higher tear viscosity, and incomplete nasolacrimal duct patency. However, immaturity may result in slower breakdown and excretion. Conclusion Dexamethasone was detected in all post-dose serum samples. At this dosing, there was a transient decrease in endogenous cortisol, but baseline levels seemed to be restored in follow-up predose samples.

SESSION IX (Part 1): Neuro-Ophthalmology: Diagnostic Conundrums in Pediatric Visual Loss

Moderators: G. D. Hildebrand (Switzerland), O. Ehrt (Germany)

OP 12 • How do Glial Precursors Defects Lead to Optic Disc Anomalies in the Papillorenal Syndrome?

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Objective of the study: The optic discs in the papillorenal syndrome have large excavations, few axons, lack of central retinal arteries and multiple cilioretinal arteries. Although some of the patients have mutations in the Pax2 gene, there is no definitive pathogenetic explanation. Some authors propose defective transition from hyaloid to central retinal artery vascularization causing hypoxia. Here we aim to find a common cause for the anomalies based on experimental findings.

Materials and methods: Immunofluorescence with anti-Pax2, anti-Pax6 and anti-Brn3 antibodies and blood vessel staining with IsolectinB4 were conducted on retinal cryosections obtained from mouse and human fetal retinas. Images were captured using a confocal microscope and processed utilizing ImageJ software.

Results: In embryos, Pax2 and Pax6 are expressed in complementary domains of the optic cup and stalk, in close proximity to the area where the first ganglion cells arise. The Pax2 glial precursors and the still open optic fissure provide direct passage for the pioneer axons to the optic stalk. At later ages, in the midgestational human retina and in the postnatal mouse retina, Pax2 astrocytes migrate in the retina and attract the vascularization.

Discussion: The dual expression of Pax2 in astrocytes and their precursors suggest a role of these cells in the vascular and axonal anomalies. Pax2 knock-out mice have larger Pax2 domains, failure of optic fissure closure, misrouted axons and ganglion cell death. Astrocytes migrate in the retina following the axons.

Conclusions: Dysfunctional glial precursors (due to mutations in Pax2 or other genes of the Pax2 pathway) are unable to attract ganglion cell axons and to close the optic fissure. This leads to the lack of central retinal arteries and to aberrant blood vessel origin in the periphery of the disc, possibly guided by the misrouted axons or by the astrocytes in the extended Pax2 domain.

OP 13 • Retinal Phenotypes of NF2-Related Schwannomatosis in Children

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Objective: To characterise the diagnostic circumstances of NF2-related schwannomatosis (NF2) and its retinal phenotype on spectral domain optical coherence tomography (SD-OCT) in children.

Materials and Methods: Retrospective case series in the ophthalmology department of a tertiary referral center in France. Children with NF2 examined in the department were identified through a rare disease database (BAMARA). Clinical records, genetic data, and multimodal retinal imaging, including SD-OCT, were reviewed. Nine files were retrieved; one was excluded because of insufficient OCT data.

Results: Eight children aged 10 years or younger were included. Six had sporadic disease and 2 had familial disease, including 1 diagnosed prenatally. Ophthalmological manifestations were the first clinical presentation in 6 of 7 postnatally diagnosed patients, strabismus with presumed amblyopia in 4 cases. However, diagnosis was triggered by extra-ophthalmological manifestations in 6 of 7 patients, with a mean diagnostic delay of 3.7 years (range, 1–7 years). Initial fundus examination was reported as normal in most cases, and SD-OCT had never been performed at first presentation. When subsequently obtained in our department, SD-OCT revealed retinal abnormalities in all patients: retinal tufts in 7 patients, combined hamartoma of the retina and retinal pigment epithelium (CHRRPE) in 6 patients, and an association of both tufts and CHRRPE in distinct locations in 5 patients.

Discussion: In this paediatric cohort, ophthalmological manifestations preceded the diagnosis of NF2 in the majority of cases, yet characteristic retinal lesions were often overlooked until SD-OCT was performed. These findings support SD-OCT as a sensitive tool for recognizing early retinal signs of NF2 in children.

Conclusions: Ophthalmological manifestations may represent an early diagnostic opportunity in children with NF2. Earlier use of SD-OCT in children with unexplained or treatment-resistant strabismic amblyopia could reduce diagnostic delay by enabling earlier detection of specific lesions.

SESSION IX (Part II): Neuro-Ophthalmology and Rare Pediatric Syndromes

Moderators: E. Larsson (Sweden), G. Milea (Romania)

RF 24 • Tadpole Pupil in a Child with Congenital Horner Syndrome and Internal Carotid Artery Agenesis

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Introduction: Congenital Horner's syndrome is a rare condition classically presenting with ipsilateral miosis, blepharoptosis, and facial anhidrosis, with other possible features including iris heterochromia. It also shares a rare association with tadpole pupil, in which there is an episodic, irregular distortion of the pupil often with no discernible cause. We present a constellation of rare findings: the first known case of tadpole pupil triggered by micturition in a patient whose background comprises congenital Horner's syndrome associated with an absent internal carotid artery.

Case Presentation: A 6-year-old girl with known right-sided congenital Horner's syndrome presented to the oculoplastic service because her heterochromia and ptosis had become more pronounced over time, leading to cosmetic concerns. She was otherwise well, but unusually, she also experienced unilateral tadpole pupil during micturition. On review, anisocoria with right miosis, right upper eyelid ptosis, and heterochromia were noted. Visual acuity was 6/5 binocularly. Her right upper margin reflex distance was 1mm (improving to 3mm with phenylephrine 2.5%), compared to 4mm on the left. She was offered a conjunctival-Müller's muscle resection.

Discussion: Agenesis of the internal carotid artery is a very rare finding, and has a documented association with Horner's syndrome, the condition most commonly linked to tadpole pupil. There is currently no consensus on the mechanism underpinning this pupillary abnormality, nor its relationship with Horner's syndrome. However, unlike in most adult cases, among children there is typically an identifiable precipitant for tadpole pupil, such as ocular surgery, or micturition in this example.

Conclusions: This case comprises a grouping of rare findings, outlining the first reported example of tadpole pupil triggered by micturition, and adds to the limited literature on this subject. Further research is warranted to explore the underlying pathophysiology behind this rare pupillary abnormality.

RF 25 • Clinical presentation of ACO2-related optic atrophy in children

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Objective: Variants in the Aconitase 2 (ACO2) gene are among the most frequent causes of autosomal hereditary optic neuropathies. This case series describes the clinical presentation of ACO2-related optic atrophy in a paediatric population.

Materials and Methods: This monocentric retrospective case series included children diagnosed with optic atrophy associated with genetically confirmed ACO2 variants. The following demographic, functional, and imaging data were collected: sex, age at diagnosis, best-corrected visual acuity at the first and last examinations, fundus findings, as well as retinal nerve fibre layer (RNFL) and ganglion cell complex (GCC) thickness measured by optical coherence tomography (OCT). A systemic evaluation was performed to identify any extra-ophthalmological involvement.

Results: Five patients from three families were included. Biallelic ACO2 mutations were identified in all cases. In four children, abnormal visual behaviour or optic disc pallor led to the diagnosis, which was established at a mean age of 3 years. The clinical phenotype was consistent with a classical hereditary optic neuropathy, characterized by temporal optic disc pallor associated with thinning of the RNFL and GCC on OCT. No retinal abnormalities were detected. Visual prognosis was poor, with final visual acuity consistently below logMAR 1.0 in all patients. In one family, optic neuropathy was associated with mild to moderate auditory neuropathy. No other systemic involvement was observed. The fifth patient presented with a phenotype consistent with infantile cerebellar-retinal degeneration (ICRD), a progressive neurodegenerative disorder. The first symptoms, including axial hypotonia and developmental delay, appeared at 6 months of age. The combination of severe optic atrophy and rod-cone dystrophy was responsible for profound visual impairment.

Discussion: In children, autosomal recessive ACO2 variants are associated with marked clinical heterogeneity, ranging from isolated optic atrophy to syndromic forms with severe neurodegenerative involvement. Visual function was severely impaired in all patients included in this series.

RF 26 • Orthoptist-Led Paediatric Optic Disc Clinic for Suspected Disc Abnormalities

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Purpose: To evaluate clinical outcomes and service efficiency of an orthoptist-led paediatric optic disc clinic (OPDC) within a UK NHS trust, established to manage increasing referrals for suspected optic disc abnormalities.

Methods: A retrospective review was conducted of 149 paediatric patients assessed between January 2025 and April 2026. Children referred with suspected optic disc abnormalities by community optometrists, the emergency eye clinic, paediatricians or neurologists were included. All patients underwent comprehensive clinical history taking and symptom review. Assessment included LogMAR visual acuity, colour vision, contrast sensitivity, multimodal imaging, Goldmann visual fields, and optic disc ultrasound. Data collected included demographics, referral source, presenting symptoms, referral indication, referral-to-appointment interval, diagnosis, outcomes, follow-up requirements, and use of neuroimaging or urgent neurology referral.

Results: The mean age was 10 years, and 55.7% of patients were female. Most referrals originated from optometrists (89.3%), with 60.4% following routine eye examinations. At the OPDC assessment, 45.6% were symptomatic. The most common referral indication was blurred or indistinct optic disc margins (79.2%). Diagnoses included normal anatomical variants (54.4%), optic disc drusen/peripapillary hyperreflective ovoid mass-like structures (24.2%), crowded discs (10.7%), and tilted discs (10.1%). One patient was suspected of papilloedema; subsequent MRI was normal. The mean referral-to-appointment interval was 74 days. Following assessment, 63.1% were discharged, 34.2% required follow-up for persistent symptoms or unreliable visual field testing and a small minority required onward ophthalmology referral. Discussion Increasing referrals likely reflect heightened awareness of the need to exclude papilloedema and medico-legal pressures for timely detection. However, most cases were benign anatomical variants, highlighting the value of a dedicated triage pathway.

Conclusions: An OPDC provides an effective, safe triage model that enables discharge after initial assessment in most cases and reduces unnecessary investigations.

RF 27 • Infrared Pupillometry Using an OCT Scanner in Babies to Assess Anisocoria: A Case Report

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Introduction: Anisocoria is a subtle but important clinical sign which may herald life-threatening disease. Assessment of pupillary size and interocular symmetry is an essential part of examination of children with ptosis or anisocoria. In order to identify and categorise anisocoria, pupillary reactions must be measured in photopic and scotopic conditions. Pupil examination may be challenging in paediatric patients who may be unable to cooperate with testing. In paediatic patients with dark irides it may be impossible to assess pupils effectively, particularly in scotopic conditions. We discuss the use of the commonly available Heidelberg Spectralis OCT machine to capture infrared pupil photographs to aide assessment of anisocoria in babies and children.

Case presentation: We present a case of an 18 week old baby presenting with eyelid swelling which was initially treated as pre-septal cellulitis. Specialist paediatric ophthalmology examination identified ptosis and ipsilateral pupillary miosis and investigation was initiated for Horner syndrome. Imaging of the sympathetic chain revealed a neuroblastoma anterior to the T1/2 vertebral bodies. The child was referred urgently to paediatric oncology.

Discussion: OCT imaging is ubiquitous in ophthalmology clinics. The Heidelberg Spectralis OCT takes infrared images of the fundus. This facility can be manipulated to take facial photographs of babies in photopic and scotopic conditions with minimal cooperation on their part. Pupils can then be clearly identified, even in dark eyed subjects. Pupil photographs may then be measured to micrometre accuracy, using the inbuilt measurement tool. Images are stored within the electronic patient record.

Conclusions: We present a step by step guide to using a readily available piece of ophthalmic equipment to accurately assess anisocoria in babies and children.

SESSION X: Pediatric Ocular Oncology: Borderline Retinoblastoma and Treatment Toxicities

Moderators: F. Munier (Switzerland), N. Voide (Switzerland)

OP 14 • Clinical Outcomes of Retinoblastoma Treatment in Bucharest, Romania (2022-2025)

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Objective of the study: To present the outcomes of retinoblastoma (Rb) treatment in Bucharest, Romania, between 2022 and 2025.

Materials and Methods: Before the Covid-19 pandemic, the treatment options for children with Rb in Romania were limited to systemic chemotherapy and enucleation when indicated. Patients requiring focal therapies were referred to specialized centers in Europe. In spring 2020, due to travel restrictions, a dedicated Rb program was initiated at the „Maria Sklodowska Curie" Children's Emergency Hospital in Bucharest, in collaboration via telemedicine with expert centers in Lausanne and Paris. We retrospectively reviewed all patients diagnosed between 2022 and 2025, evaluating age at diagnosis, presenting sings, laterality, disease classification, and treatment modalities.

Results: Twenty-seven children were diagnosed with Rb during the study period. Leukocoria was the presenting sign in 20 cases. Twenty patients had unilateral disease and seven had bilateral disease. Two children had a positive family history, and 16 were younger than12 months at diagnosis. Among unilateral cases, six eyes were classified as Group C and 14 as Group D. In bilateral diseases, four patients were classified as Group D/A, one as Group D/B, and two as Group E/B. A total of 12 enucleations were performed, including one primary enucleation, for advanced group D/E disease. Thirteen children received focal treatments, including transpupillary thermotherapy (TTT), cryotherapy and intraocular topotecan injections. Seven children with unilateral Rb were referred abroad for intraarterial chemotherapy (IAC).

Discussion: The establishment of a Rb center in Romania has significantly improved access to specialized care. Although treatment costs are covered through the S2 form, traveling to European centers every four weeks remains a considerable financial and emotional burden for families, particularly those with very young children.

Conclusion: Although some advanced treatments still require referral abroad, this program represents an important step toward comprehensive Rb management in Romania.

OP 15 • Pediatric Cancer Immunotherapy and Ocular Toxicity: A Four-Case Series

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Introduction: Cancer immunotherapies are increasingly used in the treatment of high-risk and metastatic malignancies. Nevertheless, the immune activation induced by these therapies may lead to immune-related adverse events (irAEs), including ocular inflammatory disorders whose manifestations resemble chronic intraocular inflammation and can therefore be mistaken for uveitis.

Case presentation: We describe four paediatric cases of irAEs. Two patients with neuroblastoma developed bilateral optic disk oedema, beyond the more commonly reported mydriasis, while receiving the anti-GD2 monoclonal antibody Dinutuximab. A third patient developed bilateral optic disk and macular oedema and severe vasculitis during treatment with the BRAF inhibitor Dabrafenib for Langerhans cell histiocytosis. The fourth patient, treated with combined MEK inhibitor Trametinib and again BRAF inhibitor Dabrafenib therapy for optic pathway glioma, developed bilateral anterior granulomatous uveitis.

Discussion: We highlight the diagnostic challenges posed by these cases, which require close multidisciplinary collaboration between ophthalmologists, oncologists, and the broader medical team. Management must be individualized according to the severity of the ocular presentation, as treatment does not invariably require discontinuation of systemic therapy. Early recognition and coordinated care are essential to ensure both adequate control of ocular toxicity and continuation of potentially life-saving anticancer treatment whenever feasible.

Conclusions: The clinical presentation of irAEs is highly heterogeneous, both in terms of manifestations and time to onset. A broad spectrum of ocular signs and symptoms may closely mimic genuine inflammatory disorders, particularly uveitis. In addition, the variable delay between treatment initiation and symptom onset may contribute to misdiagnosis and delayed recognition, potentially postponing appropriate management. Therefore, irAEs should be systematically considered in the differential diagnosis of uveitis across all age groups, including paediatric patients, in whom these complications remain likely underrecognized.

RF 28 • Ophthalmological Manifestations of CBL Syndrome

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Introduction: Variants in the CBL gene, involved in the regulation of the RAS–MAPK pathway, are associated with an expanding clinical spectrum. Ophthalmologic manifestations, still poorly described, appear to be remarkably heterogeneous. We present a small case series illustrating the extreme variability of CBL-related ocular involvement.

Methods: We conducted a retrospective study of five patients carrying a CBL variant and followed in two university hospitals. Ophthalmologic and systemic data were extracted from clinical records. Variants were identified through targeted sequencing or exome analysis.

Results: The ophthalmologic spectrum observed in this series showed striking phenotypical variability, ranging from a normal examination in one case, to severe abnormalities predominantly affecting the posterior segment. Reported findings included: anterior uveitis, recurrent vitreous haemorrhages, rod-cone retinal dystrophy, and retrobulbar optic neuropathy. Intrafamilial variability was notable: the same variant could lead to a complex clinical picture with the combination of all possible ocular manifestations, leading to the diagnosis, in one patient, and only a mild retinal dystrophy in an affected relative. Ocular manifestations were sometimes part of severe systemic presentations, particularly haematological disorders, such as juvenile myelomonocytic leukaemia, but did not necessarily reflect the overall severity of the systemic phenotype.

Conclusion: CBL variants generate an exceptionally broad ophthalmologic spectrum, with no clear correlation to systemic involvement. This series highlights the importance of systematic ophthalmologic screening in all patients carrying a CBL variant, even in the absence of visual symptoms. Early recognition of ocular abnormalities is essential to guide multidisciplinary surveillance and to anticipate possibliy associated haematological complications.

SESSION XI: Evidence-Based Myopia Control: Spectacle Lenses and Pharmacological Strategies

Moderators: A. Dahlmann-Noor (United Kingdom), D. Goicea (Romania)

OP 16 • Effectiveness of DIMS Spectacle Lenses on Myopia Control in Romanian Children: 3-Year Results

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Purpose: To report the real-world 3-year effectiveness of Defocus Incorporated Multiple Segments (DIMS) spectacle lenses, alone or combined with 0.025% Atropine, in controlling myopia progression in Romanian children using age-specific physiological axial elongation norms.

Methods: Single-center observational study including 71 children (142 eyes, 56% girls, mean age 9.9 ± 2.50 years) with 36 months of follow-up. Spherical equivalent refraction (SER) and axial length (AL) were measured at baseline, 6, 12, 18, 24, and 36 months. Treatment response was classified using OSLM age-specific norms as: good response (AL within physiological range), low–moderate response (0.05–0.10 mm/year above the physiological upper limit), and no response (>0.10 mm/year above). Children exceeding age-matched AL thresholds received 0.025% Atropine added to DIMS (Group DIMS+A, n=34 eyes); the remaining children continued DIMS monotherapy (Group DIMS, n=108 eyes).

Results: Mean annual AL elongation was 0.070 mm in Year 1, 0.105 mm in Year 2, and 0.095 mm in Year 3. Over 3 years, 89% of all eyes (127/142) achieved a good response and 8% (12/142) a low–moderate response, with only 2% (3/142) showing no response. In Group DIMS, 94% achieved a good response cumulatively, with no eyes classified as no response. SER progression remained ≤0.50 D/year in 97% of all eyes. AL progression at 6 months strongly predicted 3-year outcome ($r=0.62$, $p<0.001$), supporting early treatment adjustment. In Group DIMS+A, axial elongation in the 6 months after Atropine addition was reduced by 80% compared to the preceding 6 months (0.141 vs. 0.028 mm, $p<0.001$), with 79% of eyes improving.

Conclusions: Over three years, DIMS spectacle lenses maintained axial elongation within age-specific physiological limits in the large majority of Romanian children. Timely addition of low-dose Atropine in fast progressors substantially improved outcomes, and early AL response at 6 months proved a reliable predictor of long-term success.

OP 17 • Atropine and China's 2018 Myopia-Control Policies: Systematic Review and Policy-Era Appraisal

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Objective of the study: In 2018, China introduced national myopia-control policies targeting children's routines through family- and school-based measures, including more outdoor time, reduced near work, and lower academic pressure. These behavioural shifts could reduce baseline myopia severity, slow progression, and influence atropine effectiveness. This review aimed to assess randomized controlled trials (RCTs) of atropine in Chinese children before and after the 2018 policy period, evaluating baseline severity, spherical equivalent refraction (SER) and axial length (AL) progression, and the feasibility of policy-era synthesis.

Materials and methods: We conducted a PRISMA-guided systematic review of PubMed, Scopus, Cochrane, and trial registries, with searches updated to 31 December 2025. Eligible RCTs evaluated atropine in Chinese children. Extracted data included baseline and 12-month SER/AL outcomes, dose, comparator, sample size, recruitment period, and design. Studies were classified using 30 August 2018 as the policy threshold. Risk of bias, policy latency, COVID-period exposure, comparator type, and geographic policy context were assessed.

Results: Fourteen trials were included: five pre-policy, three transition/mixed-exposure, and six post-policy trials. Using 30 August 2018 as the threshold showed that evidence was unsuitable for stable policy-era meta-analysis. Main limitations were dose–era confounding, comparator and atropine-arm size heterogeneity, COVID/post-policy collinearity, and inconsistent behavioural reporting. Discussion Although meta-analysis can summarize atropine outcomes, current evidence cannot reliably assess a post-policy effect. This review remains valuable by mapping randomized evidence and identifying barriers to causal interpretation, including dose–era confounding, comparator heterogeneity, COVID overlap, geographic differences, and limited behavioural reporting.

Conclusions: Current evidence cannot determine whether China's government-instituted myopia-control policies modify atropine outcomes, given the study limitations outlined above. Understanding this possible interaction is clinically important, as policy-driven behavioural changes may influence atropine efficacy, optimal dosing, side effects, rebound, and long-term myopia-control strategies. Future trials should measure behavioural and policy-related exposures alongside pharmacological treatment outcomes.

RF 29 • Effect of Systemic Diseases on Myopia Progression and Response to Myopia Control Spectacle Lenses

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Purpose: To evaluate the effects of accompanying systemic diseases and myopia control spectacle lenses on spherical equivalent (SE) progression and axial length (AL) elongation in myopic children

Methods: Medical records of pediatric myopic patients ≤10 years old with ≥2 years of follow-up were retrospectively reviewed. Patients with previous ocular surgery or retinal dystrophy were excluded. Patients were divided into two groups according to the presence of systemic disease. Baseline and final SE and AL values, as well as changes in SE and AL, were compared between groups to evaluate the response to myopia control spectacle lenses.

Results: Fifty-two eyes of 52 patients were included, and the more myopic eye was analysed. Twenty-two patients (42.3%) were in the non-systemic disease group and 30 (57.7%) were in the systemic disease group. Mean follow-up duration was 91.4 ± 54.7 months. Mean age was 6.45 ± 2.60 years in the non-systemic group and 5.60 ± 3.02 years in the systemic disease group (p=0.280). Neurological diseases were the most common systemic disorders (66.7%). Baseline SE and AL were −3.13±2.98 D and 23.66±0.95 mm in the non-systemic group, and −4.73±3.85 D and 23.94±1.73 mm in the systemic disease group, respectively (p=0.098 and p=0.495). In the systemic disease group, mean ΔSE was −0.52±0.77 D in spectacle lens users and −2.23 ± 3.35 D in non-users (p=0.041). Mean ΔAL was 0.31±0.24 mm in users and 1.36±1.32 mm in non-users (p=0.006). In the non-systemic disease group, reductions in SE progression (−0.09±2.60 D vs −1.58±1.50 D, p=0.132) and AL elongation (0.69±0.53 mm vs 0.91±0.49 mm, p=0.353) favoured spectacle lens users, although differences were not statistically significant.

Conclusion: Myopia control spectacle lenses were associated with reduced SE progression and AL elongation in children with systemic diseases. Although reductions were also observed in children without systemic diseases, statistical significance was not achieved.

RF 30 • DIMS lenses vs 0.01% atropine in myopia control: 2-year RCT in Central European children

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Background/Aims: The global rise in childhood myopia highlights the need for effective control strategies. This study compared the efficacy of Defocus Incorporated Multiple Segments (DIMS) spectacle lenses and 0.01% atropine eye drops in European children over two years.

Methods: A total of 110 Polish and Ukrainian children aged 6–16 years without significant ocular pathology were randomised to single-vision spectacles with nightly 0.01% atropine (group A) or DIMS lenses with nightly placebo (group B). Primary outcomes were changes in cycloplegic spherical equivalent refraction (SER) and axial length, assessed every 6 months.

Results: At 24 months, axial elongation was lower in group B than in group A (0.22 ± 0.22 mm vs 0.32 ± 0.29 mm), particularly in children aged 6–11 years (0.30 ± 0.23 mm vs 0.48 ± 0.31 mm). SER progression showed similar trends (0.47 ± 0.47 D vs 0.70 ± 0.58 D), with the greatest differences in younger children (0.59 ± 0.48 D vs 1.05 ± 0.64 D). Differences in older children were smaller.

Conclusions: DIMS lenses showed greater efficacy than 0.01% atropine in slowing myopia progression, particularly in children aged 6–11 years, and may represent an effective option for myopia control in European populations.

SESSION XII: Systemic Diseases, Visual Development Deficits, and Multidisciplinary Care

Moderators: R. Taylor (United Kingdom), O. Andrei (Romania)

OP 18 • Phenotypic Spectrum and Systemic Associations of Microphthalmia: 25-Year Tertiary Center Experience

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Purpose: To characterize the demographic, ocular, and systemic features of microphthalmia in a tertiary referral center and to compare findings between isolated and mixed subtypes

Methods: In this retrospective study, medical records of patients diagnosed with microphthalmia between January 2000 and January 2025 were reviewed. Patients were classified as isolated or mixed microphthalmia based on the presence of coloboma and/or orbital cyst. Demographic, ocular, systemic, imaging, and management data were analysed.

Results: A total of 85 patients (114 eyes) were included; 65.9% had unilateral involvement. Isolated microphthalmia was slightly more common than mixed microphthalmia (51.8% vs. 48.2%). Coloboma was present in 44.7% of eyes, and additional ocular anomalies were observed in 72.8%. Anterior segment anomalies were more frequent in isolated microphthalmia (39.0% vs. 9.1%, $p<0.001$), whereas orbital/lacrimal anomalies were more common in mixed cases (18.2% vs. 3.4%, $p=0.013$). Axial length, corneal diameter, and visual acuity did not differ significantly between groups. Systemic anomalies were identified in 32.9% of patients, most commonly involving neurologic, musculoskeletal, and genitourinary systems. Developmental delay (OR 18.00, 95% CI 4.53–71.45) and hearing impairment (OR 33.22, 95% CI 1.80–614.44) were associated with systemic involvement, although the latter finding should be interpreted cautiously. Imaging was performed in 50.6% of patients, and 60% underwent interventions beyond observation.

Conclusion: Microphthalmia demonstrates marked clinical heterogeneity with frequent ocular and systemic associations. Differences between phenotypes may reflect distinct developmental mechanisms. Comprehensive ophthalmic and systemic evaluation, along with multidisciplinary management, is essential for optimal care.

RF 31 • Ocular Manifestations in Fetal Alcohol Syndrome Disorders (FASD): Assessing the FASD Eye Code

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Objective: Over the past 25 years, our multidisciplinary team has documented visual and ocular findings in Swedish cohorts with FASD. The objective was to summarize ophthalmological manifestations in individuals with FASD, and to evaluate the clinical utility of the FASD Eye Code as a complementary tool for diagnosis and long-term management.

Materials and methods: Children and adolescents with FASD underwent multidisciplinary assessments. Ophthalmological examinations covered visual acuity, refraction, binocular function, fundus evaluation, and history-taking of visual perception. A subset of individuals with FASD was followed from childhood into adulthood. Health- and visual-related quality of life (QoL) was evaluated. The FASD Eye Code was applied across four domains; visual acuity, refraction, binocular function, and structural abnormalities, generating cumulative severity scores. Control groups consisted of healthy children and children with similar ocular abnormalities of other origins.

Results: Visual acuity was lower than controls, a finding persisted in adulthood. Refractive errors were found in 16-21%, particularly astigmatism. Impaired stereopsis and strabismus were consistent; defective stereoacuity affected two thirds, while strabismus remained stable at around 40%. Optic nerve hypoplasia, increased retinal vessel tortuosity, and thinning of the retinal nerve fibre layer (RNFL) were repeatedly documented. More than half of young adults with FASD reported visual perception difficulties, compared with a minority of controls, with similar prevalence already present in childhood. Health- and visual-related QoL were significantly lower in the FASD group compared with controls. Evaluation of the FASD Eye Code showed high specificity (94–100% at cut off scores ≥8–10), stable scores over time, and good discriminative ability between FASD and controls.

Conclusions: Individuals with FASD show a broad, consistent pattern of ophthalmological abnormalities that often persist in adulthood. The FASD Eye Code provides a standardized, clinically useful framework that strengthens diagnostic accuracy and supports long-term follow-up in FASD multidisciplinary care.

RF 32 • Vision Loss in Children with Avoidant-Restrictive Food Intake Disorder: A Case Series and Survey

Alexander Collins[1], Sarah Schimansky[2], Haneen Jasim[2], Daphin Fernandez[3], Christine Burren[3], Arundhati Dev Borman[2], Iolanda Guarino[4], Denize Atan[2]

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Background: Avoidant-restrictive food intake disorder (ARFID) is an eating disorder. Children with ARFID typically consume a limited range of foods, which can lead to malnutrition and its complications, such as permanent vision loss. In this case series, we describe 5 children with ARFID complicated by vision loss and highlight the views of the patients and their families.

Methods: 1) Retrospective case series, and 2) patient survey with qualitative analysis of the responses.

Results: Five children are included in this series who each had social and communication difficulties, including autism spectrum disorder, which complicated their diagnosis of vision loss; indeed, they developed non-visual behavioural changes prior to their presentations. Laboratory investigations identified nutrient deficiencies in all cases. Despite nutritional supplementation, the vision loss was permanent in three cases. Three families completed the survey and described the “devastating” consequences of vision loss on their child; they advocated for better training and education of medical professionals and families who care for children with ARFID.

Conclusions: Children with ARFID should be managed by a multidisciplinary team with expertise in managing their disordered eating behaviours so that complications, such as vision loss, are avoided. To prevent permanent sight loss, nutritional supplementation should be commenced in children who have a high risk of nutritional blindness based on their diet history, and without waiting for the results of laboratory investigations.

RF 33 • Visual Perceptual Deficits in Fetal Alcohol Syndrome: TVPS-4 Findings

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Foetal Alcohol Syndrome (FAS) is a neurodevelopmental disorder caused by prenatal exposure to alcohol and is associated with cognitive deficits and impairments in visual processing.

Objective of the study: To describe visual perception performance in patients with FAS, focusing on TVPS-4 results following a comprehensive eye examination.

Materials and methods: This cross-sectional study included 49 patients diagnosed with FAS, with a mean age of 16.2 ± 4.04 years. Visual perception was assessed using the Test of Visual Perception Skills, fourth edition (TVPS-4), administered to 40 participants.

Results: Visual function, as determined by routine ophthalmological examination, was well preserved, although 39% of cases presented with unilateral or bilateral optic nerve hypoplasia. However, the results of the TVPS-4 showed low overall performance, with a total score of 31. Subscale scores were also low: visual discrimination (63), visual memory (37), spatial relations (25), shape constancy (31), sequential memory (25), visual figure-ground/localisation (16) and visual closure (25). These findings indicate deficits in multiple domains of visual perception, particularly in visual memory and object localisation tasks.

Discussion: The low scores observed across all domains of the TVPS-4 suggest a generalised impairment of visual perception in patients with foetal alcohol syndrome (FAS). These deficits may be linked to broader neurodevelopmental abnormalities associated with prenatal alcohol exposure, as described in previous studies.

Conclusions: Visual difficulties in patients with FAS may be underdiagnosed if the ophthalmological examination does not include a perception test such as the TVPS-4.

SESSION XIII: Amblyopia, Accommodative Disorders, and Vision Screening Challenges in Special Populations

Moderators: S. Jain (United Kingdom), L. Teodorescu (Romania)

OP 19 • Wandsworth Children's Eye Study: School-Based Multimodal Assessment in a Diverse Urban Population

Dahlmann-Noor Annegret, Megan Jacobson, Alicia Fothergill, Vijay Tailor-Hamblin, Meei Fang Wong, Varshie Jeyarajah

NIHR Moorfields Biomedical Research Centre, London, UK

Purpose: To evaluate visual function, refractive status, and ocular health in a diverse paediatric population using a comprehensive, school-based assessment model.

Methods: Between January and March 2026, we carried out a cross-sectional study in three primary and three secondary schools in Wandsworth, London, UK. Over 1,000 children aged 8–18 years underwent multi-station assessment including visual acuity (LogMAR), non-cycloplegic open-field autorefraction, axial length measurement, intraocular pressure, anterior segment imaging (OCT, topography, tear film), posterior segment OCT, and orthoptic and neuro-ophthalmic virtual reality technology-based evaluation. Participant experience and test duration were recorded, as well as test findings.

Results: Eight percent of participants had bilateral habitual visual acuity worse than 0.2 logMAR, with approximately 75% not having or not wearing corrective lenses. Interocular acuity difference >0.2 logMAR was observed in 7%. Myopia prevalence was 23% (16% mild, 6% moderate, 1% high), with 23% demonstrating axial length ≥24 mm. Elevated intraocular pressure (>21 mmHg) was observed in a subset (IOPg: 281 eyes; IOPcc: 90 eyes), warranting further evaluation. Tear film abnormalities were common, with first tear break up time less than 10 seconds observed in 38%, twice as high as published prevalence rates. Eye alignment abnormalities (≥10 prism dioptres) were detected in up to 3.5%. Most tests were rated "easy/very easy" by ≥77% of participants, except tonometry (63%). Median total assessment time was approximately 15 minutes.

Conclusions: This large-scale, school-based study demonstrates the feasibility of high-throughput, multimodal paediatric eye assessment and identifies a substantial burden of uncorrected visual impairment and myopia in an ethnically diverse urban cohort.

OP 20 • Ophthalmic screening in Down syndrome: Revised Best Practice Recommendations

Saurabh Jain, George Riding

University College London, UK

Children with Down syndrome have a disproportionately high burden of ocular pathology, with up to two-thirds affected by significant ocular abnormalities. Congenital cataract, infantile glaucoma, refractive error, accommodative deficits, strabismus, nystagmus, and keratoconus are highly prevalent in this group. Most of these disorders are a significant cause of preventable secondary disability at all ages and there should be extra vigilance.

We present an updated best practice recommendation for ophthalmic screening in children with Down syndrome, developed on behalf of the Down Syndrome Medical Interest Group (DSMIG), and endorsed by the Royal College of Ophthalmologists Paediatric Subcommittee. The best practice recommendation aims to guide paediatricians and community paediatric services to ensure the high prevalence of ocular pathology in this cohort is appropriately screened.

A systematic appraisal of the literature published since the 2012 DSMIG best practice recommendation was undertaken. Twenty additional studies have been referenced and incorporated into the updated guideline following critical appraisal by the authors and iterative peer review from the DSMIG Guideline Committee and the Paediatric Subcommittee.

The recommended minimum surveillance pathway includes newborn examination at 72-hours and 6-8 weeks, formal ophthalmic assessment at 18–24 months, and minimum 2-yearly assessment between ages 4 and 10 years, with a preference for annual review. Key updates include annual screening from age 10 years should include corneal topography to enable early detection of keratoconus, increased emphasis on the benefits of bifocals, and improved recognition of cerebral visual impairment (CVI).

RF 34 • Functional Spasm of the Near Reflex in Adolescents: A 3-Case Series

Bouvarel Hugo, Nicolas Pianton

Hôpital Edouard Herriot, France

Purpose: To describe the clinical spectrum, diagnostic pitfalls, and management challenges of Spasm of the Near Reflex (SNR) through a series of three pediatric cases.

Methods: Retrospective case series of three adolescents (aged 12–15) presenting with acute or subacute visual disturbance and diplopia. Clinical evaluation included ocular motility assessment, cycloplegic and non-cycloplegic refraction, pupillary examination as well as anterior segment and fundus evaluation.

Results: All three patients exhibited the classic SNR triad: fluctuating pseudomyopia from accommodative spasm, variable large-angle esodeviation mimicking pseudo-abducens palsy, and miosis. Additional findings included saccadic oscillations (flutter). Organic neurological causes were ruled out by unremarkable neuroimaging (brain MRI) and a consistently stable neurological status during follow-up. A strong correlation with Functional Neurological Disorder (FND) was identified in all cases.

Discussion: SNR is a frequent mimic of organic pathology, such as abducens nerve palsy. While systematic neuroimaging remains essential to exclude rare structural or inflammatory triggers (such as midbrain lesions or multiple sclerosis), the fluctuating nature of the clinical signs often points towards a functional etiology. Our series highlights significant management challenges: although pharmacological cycloplegia and near-vision plus-lens additions can alleviate the mechanical spasm, the underlying functional nature necessitates a multidisciplinary approach. Failure to recognize the FND component early often leads to a diagnostic odyssey and unwarranted invasive investigations.

Conclusion: Pediatric ophthalmologists should remain vigilant for signs of SNR in adolescents presenting with variable esotropia. While systematic neuroimaging remains essential to rule out rare organic or inflammatory triggers, recognizing the functional pattern is crucial to avoid repetitive over-testing and to initiate an appropriate multidisciplinary management strategy.

RF 35 • Pediatric Low Vision Rehabilitation in Moldova: Outcomes and Challenges

Ghidirimschi Tatiana

LOW VISION Center, Republic of Moldova

Low vision rehabilitation in children is a key component of pediatric ophthalmology, aiming to improve functional vision, educational performance, and social participation in children with irreversible visual impairment. Integrated models combining clinical care and assistive technologies are emphasized. The LOW VISION Center in Moldova is the only accredited national provider of specialized rehabilitation services for individuals with visual impairment. Since 2009, it has developed a comprehensive model integrating clinical assessment, assistive technologies, and structured rehabilitation pathways. In collaboration with international partners from Norway, the Center contributed to strengthening ophthalmic services through capacity-building, modern diagnostic and treatment equipment, and development of the optometry speciality. Methods A retrospective observational study included children with low vision followed over 17 years. Data included demographics, etiology, baseline visual acuity, assistive technologies, and follow-up. Functional outcomes were assessed based on reading, school integration, and independence. One representative case is presented. Results Since 2009, over 4,500 visits were recorded within a cohort of more than 16,700 patients, of whom approximately 2,500 were unique children, reflecting repeated follow-up. A shift toward modern assistive technologies was observed. Functional improvement was achieved in over 90% of children, particularly in reading and educational participation. Optometric activities have been incorporated into the multidisciplinary care team. Key challenges remain delayed referral, unequal access to assistive technologies, and variable adherence. Rehabilitation of children with total blindness remains an unmet challenge. Conclusion Low vision rehabilitation in children plays a central role in pediatric ophthalmology by improving functional outcomes and supporting educational and social integration. Outcomes were achieved through integrated rehabilitation services enabled by capacity building and international collaboration. The model strengthens eye care systems and improves continuity of care. Despite positive results, rehabilitation of children with total blindness remains a major challenge requiring multidisciplinary management. Early identification, timely referral, and close collaboration between ophthalmologists and rehabilitation services are essential to optimize outcomes.

RF 36 • Vision Screening in Disadvantaged Communities: Late Detection and New Care Pathways

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Objective of the study: In disadvantaged communities, the weakest point of paediatric vision screening is often not finding the child, but keeping the child in care. We evaluated whether a community-based outreach programme could move beyond case detection and create new care pathways, using “visions saved” as a pragmatic framework for timely interventions preventing persistent amblyopia.

Materials and methods: The Paediatric Ophthalmology Screening Programme of the Hungarian Charity Service of the Order of Malta has provided eye care since 2020 for children aged 0–18 years living in settlements participating in Hungary’s Catching-Up Settlements Programme. The model combines trained lay screeners, optometrist-led examinations, telemedical paediatric ophthalmology supervision, spectacle provision, amblyopia management, follow-up visits and surgical coordination. “Visions saved” were reported through standard clinical components: amblyogenic spectacle prescriptions, visual acuity outcomes, occlusion adherence and surgery.

Results: Between 2020 and 2023, 26,410 screenings reached 19,724 children in 127 settlements. Overall, 2,773 spectacles were prescribed; 1,224 (44%) were for amblyogenic refractive errors. Amblyopia was identified in 960 children (4.9%). Occlusion therapy was prescribed for 206 children; however, regular patching could be verified in only 20%. Among children with verified adherence, 57% improved by at least one line. Eleven cataract surgeries, three ptosis surgeries and 30 strabismus surgeries were organised. In 17,585 previously untreated children first examined at ≥6 years, amblyopia was detected in 1,086 (6.17%), mostly after age eight. Despite late presentation, 44.6% with follow-up improved by at least one line.

Discussion: The main lesson is that screening must be designed around real-world barriers: delayed presentation, poor follow-up, limited health literacy, transport difficulties and fragile adherence.

RF 37 • Is Amblyopia Truly Cured? Functional Outcomes After Perceptual Learning

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Objective of the study: To evaluate residual functional visual deficits in pediatric amblyopic patients with normal best-corrected visual acuity (BCVA = 1.0) after occlusion therapy, and to assess the effect of post-treatment perceptual learning–based visual training augmented with citicoline.

Materials and methods: This observational post-treatment study included 16 patients (aged 10–18 years) with unilateral amblyopia (anisometropic 75%, strabismic 6.25%, mixed 18.75%). All achieved BCVA = 1.0 after occlusion therapy. Patients subsequently completed a perceptual learning program (RevitalVision) combined with citicoline. Functional assessment included contrast sensitivity (sine-wave grating test) and stereopsis (Stereo Fly test). Patients with bilateral amblyopia, ocular or neurological pathology, nystagmus, or incomplete therapy were excluded.

Results: Contrast sensitivity at 3 cpd was normal at baseline in amblyopic eyes. At 6 cpd, all patients showed complete recovery. Improvements were also observed at higher spatial frequencies (12 cpd and 18 cpd). Stereopsis improved markedly: before treatment, 31.25% of patients achieved stereoacuity between 100–40 arcsec, compared with 81.25% after treatment. BCVA remained stable in all patients.

Discussion: These findings challenge the assumption that normalization of visual acuity represents complete recovery in amblyopia, highlighting the presence of residual functional deficits even after successful conventional treatment.

Conclusions: Normalization of BCVA alone may not be sufficient to define amblyopia resolution. Residual deficits in contrast sensitivity and stereopsis may persist and impact daily visual performance. Incorporating functional visual assessment and targeted post-treatment interventions may improve real-world outcomes and should complement standard follow-up in amblyopia.

RF 38 • Vision Screening Barriers in Children with Autism Spectrum Disorder

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Objective of the study: To evaluate caregiver-reported barriers to eye examination in children with autism spectrum disorder (ASD) and to identify practical adaptations that may improve access, cooperation, and the effectiveness of vision screening in this special group.

Materials and methods: This questionnaire-based study included 87 parents or caregivers of children with ASD. Descriptive data were presented as numbers and percentages. Categorical variables were analyzed using chi-square or Fisher's exact tests. Associations between ordinal variables were assessed using Spearman correlation analysis. Statistical significance was accepted as $p<0.05$. Questionnaire internal consistency was good (Cronbach's alpha=0.799).

Results: Among the 87 children, 54.0% were aged 7-12 years and 86.2% were male. ASD support level was mild in 38.1%, moderate in 48.8%, and severe in 13.1%. Previous eye examination history was reported in 66.7%. Among children with prior eye examination, major barriers were crowded waiting rooms (63.8%), difficulty adapting to the hospital environment (60.3%), transportation problems (48.3%), and long travel time (44.8%). Difficult examination steps included slit-lamp examination (62.1%), ocular motility assessment (60.3%), dilated examination (60.3%), and device-based measurements (55.2%). The examination was fully completed in 62.1% of cases. Caregivers most strongly supported examination by the same team (77.6%), calm waiting areas (71.4%), shorter waiting times (70.7%), onsite screening programs (70.7%), and visual pre-examination information (65.5%), and reinforcement strategies (63.8%). Greater ASD severity was significantly associated with more difficulty in public transportation ($r=0.475$, $p<0.001$) and slit-lamp examination ($r=0.419$, $p=0.001$).

Discussion: Children with ASD face both access-related and examination-related barriers that may reduce the effectiveness of routine vision screening.

Conclusions: Adapted screening pathways, including calmer environments, shorter waiting times, visual preparation, consistent staff, and flexible onsite models, may improve access and examination success in children with ASD.

Posters Program

Scheduled coffee breaks will include structured, concurrent moderated poster viewing sessions led by designated session chairs in the designated poster area.

GROUP A: Retinal Diseases and Retinopathy of Prematurity (Day 1, 10:25 - 10:55)

Moderators: A. M. Arends-Tjiam (Netherlands), J. Rebić Jelić (Serbia)

P A01 PRISM: AI-Based Grading and Quantitative Decision Support for Retinopathy of Prematurity Screening

Kubicek Jan[1], Avinash Bansal[2], Rouhollah Kian Ara[2], Sumit Kaushik[2], Marie Chadrabova[2], Jana Bahrova[2], Magdalena Hriskova[2], Lejla Alic[3], Kristyna Marsolkova[4], Juraj Timkovic[5]

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Retinopathy of prematurity (ROP) remains a leading preventable cause of childhood blindness. Treatment-requiring ROP affects approximately 7.5% of screened premature infants globally. Yet reported incidence varies up to sevenfold across European centers - likely reflecting grading inconsistency rather than true epidemiological differences. Current screening relies on subjective image interpretation, with significant inter-observer variability in grading vascular tortuosity, haemorrhages, plus disease, and zone I involvement.

We present the individual components of prematurity retinal imaging smart monitor (PRISM), an AI-based clinical decision-support platform for quantitative ROP screening using wide-field retinal imaging. The PRISM-platform combines quantitative retinal biomarkers with clinically relevant patient metadata to support objective, consistent grading.

PRISM was trained and validated using 1,000 retinal images from 141 premature infants, acquired using Clarity RetCam 3 (n=80) and Phoenix ICON (n=61). The cohort covered the full clinical spectrum, from normal retinal development to stage 1–3 ROP, aggressive posterior ROP, retinal haemorrhages, and plus disease. Patient metadata included gestational age, birth weight, sex, and longitudinal clinical diagnosis. PRISM components include automated retinal vessel segmentation, optic disc (OD) and macula detection, and retinal haemorrhage detection. Subsequent classification of plus disease, based on retinal vascular tortuosity, haemorrhage burden, and anatomical landmark analysis, was performed using a balanced cohort (100 normal, 100 ROP plus).

Performance was evaluated using sensitivity (Se), specificity (Sp), and area under curve (AUC) on a 80/20 hold-out split. All models generalized well to unseen data, with training-to-test accuracy differences of 5–18%, confirming reliable performance beyond the training set. Retinal vessel segmentation (Se/Sp/AUC: 0.80/0.99/0.98), OD detection (Se/Sp/AUC: 0.88/0.88/0.88), macula detection (Se/Sp/AUC: 0.90/0.90/0.90), and haemorrhage detection (Se/Sp/AUC: 0.80/0.80/0.80) demonstrated consistent performance across all components. Plus disease classification achieved Se/Sp/AUC: 0.90/0.90/0.90.

PRISM provides standardized, quantitative grading outputs across all five components, potentially supporting ROP assessment and longitudinal disease monitoring in routine neonatal screening workflows.

P A02 Eye micromovements and stereoacuity in children with and without retinopathy of prematurity

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[1] Senior researcher, prof of the lab of binocular vision disorders
[2] graduate student
[3] prof, medical director of the institute

Purpose: To reveal peculiarities of Eye micromovements during a static fixation task and stereoacuity in children aged 6 -13 years with retinopathy of prematurity (RP) after laser photocoagulation (LC) and without it. Methods - 125 children were observed. Eye movement recordings were performed using the EyeLink 1000 Plus eye tracker (Canada) at a sampling rate of 2000 Hz. The recorded data were analysed with Data Viewer. Binocular vision was defined by the Worth Test. Stereovision thresholds were determined by the Lang II test and by the Titmus Stereofly test.

Results: Disorders of conjugate eye movements and saccades were significantly more often (75%) found in the group of children after LC than in the group of full-term children ($\chi 2$ =33,18, p = 0,0000…), ($\chi 2$ =4,24, p = 0.003) 26,9% respectively. These findings were confirmed with recorded eye movements by eye-tracking technology. The fixation retention test revealed significant intergroup differences in two parameters. The mean saccade amplitude was significantly lower in children with retinopathy of prematurity after LC (2.72°) than in the control group of full-term children with emmetropia (4.61°; p = 0.030). The mean pupil diameter was smaller in the laser-treated group (1269 μm) compared to emmetropic controls (1987 μm; p < 0.001). Premature infants did not have normal stereoacuity by the Titmus Stereotest in 76,2% of cases and by the Lang II test in 80,4% of cases. Only (3,8%) could not define stereovision. 38.8% of premature children who underwent LC did not show stereoscopic thresholds on the Titmus Stereofly test, and 26.8% had normal stereoscopic thresholds on the Lang II test.

Conclusion: Children with retinopathy of prematurity who underwent LC had reduced saccade amplitudes (2.72° vs 4.61°) and smaller pupil diameters (1269 μm vs 1987 μm) compared with full-term emmetropic controls. These findings indicate visual system alterations affecting fixation control, visual acuity and stereovision in these children.

P A03 Bilateral Acute Macular Neuroretinopathy in a 13-Year-Old Boy Following Influenza A Infection

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Introduction: Acute macular neuroretinopathy (AMN) is a rare outer retinal disorder presenting with paracentral or central scotomas. It is uncommon in children and may occur after viral infections.

Case presentation: A 13-year-old boy presented with sudden onset of bilateral, central scotomas, which he described as a dark spot with small blue dots. Days earlier, he was diagnosed with influenza A. Visual acuity was 0.30 logMAR in the right eye and 0.15 logMAR in the left eye at presentation. Fundus examination showed whitish clover-shaped lesions in both maculae. Changes in the outer retina visualized by optical coherence tomography (OCT) were consistent with AMN. During follow-up, visual acuity remained mildly reduced with small fluctuations (latest: 0.15 logMAR in the right eye and 0.05 logMAR in the left eye). The scotomas became less noticeable over time but did not disappear completely. Serial fundus photography documented evolution of the initial inflammatory macular lesions into areas of pigmentary change and atrophy. OCT showed resolution of the acute lesions, followed by persistent thinning of outer retinal layers. In adaptive optics retinal imaging, there was visible active inflammation that turned into areas of both preserved or atrophied photoreceptors.

Discussion: Here, the temporal association with influenza A suggests the infection acting as a trigger for AMN. The course was typical, with gradual reduction of symptoms but persistent scotomas and outer retinal thinning on OCT. As AMN has no proven effective treatment, no specific therapy was introduced and the patient was followed clinically. Although visual acuity improved slightly, the scotomas did not resolve completely, which is consistent with the usually cautious prognosis of AMN.

Conclusions: Bilateral AMN may occur in children after influenza A infection. Adaptive optics imaging provides additional insight into retinal microstructural changes; however, OCT follow-up and photographic fundus documentation remain the basis for diagnosis and monitoring.

P A04 Early Refractive Outcome in Extremely Premature Infants with or without ROP Treatment

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Objective of the study: To evaluate the refractive outcomes in micropremature and nanopremature infants with or without ROP treatment in the first year of life.

Materials and methods: A retrospective study included 33 micropreterm babies gestational age between 24 0/7 and 25 6/7, and 6 nanopreterm babies gestational age <24 weeks who were hospitalized in the Institute of Neonatology from 11th August to 30thZ July 2025. All of these patients underwent standard ophthalmology examination with indirect ophthalmoscopy and were diagnosed and treated by one ophthalmologist. Eyes were refracted using retinoscopy in cyclopegia with Cyclopentolate 0.5% by the same examiner. The examinationas were performed between 6 and 9 months in the first year of life.

Results: In 6 nanopremature infants (12 eyes) after anti-VEGF treatment we found astigmatism in 11 eyes and myopia in 1 eye. In 26 micropremature infants (52 eyes) after anti-VEGF treatment we found astigmatism in 44 eyes, hyperopia in 3 eyes and myopia in 5 eyes. In 7 micropremature infants (14 eyes) without ROP treatment we found astigmatism in all eyes.

Discussion: We found astigmatism as the most common refractive outcome in all examinated premature infants.

P A05 Clinical Decision Assistance in Retinopathy of Prematurity via Retinal Imaging: Three Case Reports

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Introduction: Retinopathy of prematurity (ROP) is a leading cause of preventable childhood blindness globally. Although binocular indirect ophthalmoscopy (BIO) remains the gold standard for screening, timely diagnosis may be limited by shortage of specialized personnel, particularly in resource-limited settings. Furthermore, inter-observer variability, especially in assessing plus disease, may lead to under- or over-treatment. Digital retinal imaging enables objective documentation, remote consultation and minimizes inter-observer variability through precise, retrospective side-by-side analysis.

Case presentation: We present three preterm infants in whom retinal imaging with RetCam facilitated accurate ROP classification and supported clinical decision-making. Case 1: An infant (gestational age (GA): 26 weeks, birth weight (BW): 820gr) was diagnosed by BIO with bilateral Stage 3, Zone II ROP. Presence of plus disease was uncertain. Retinal imaging demonstrated venous dilatation without sufficient tortuosity to meet plus disease criteria. Serial image comparison confirmed absence of type 1 ROP, allowing safe monitoring without treatment. Case 2: An infant (GA: 26 weeks, BW:840gr) presented with bilateral Stage 3, Zone II ROP, pre-plus disease, and “popcorn” lesions. Sequential side-by-side image comparison enabled longitudinal assessment between examinations, demonstrating gradual regression to peripheral Stage 2 disease without progression to plus disease, thereby supporting safe observation without treatment. Case 3: An infant (GA: 30+2 weeks, BW: 855gr) had bilateral Stage 2, Zone II ROP. While BIO findings in the right eye were equivocal for plus disease, fundus photography confirmed venous dilatation and arterial tortuosity consistent with plus disease, prompting treatment.

Discussion: Chronological, side-by-side comparison of retinal images enabled objective assessment of the extend and characteristics of vascular changes in all cases. Digital retinal imaging improved diagnostic confidence and supported clinical decision-making, ensuring timely treatment of sight-threatening disease, while safely avoiding unnecessary treatment in borderline cases.

Conclusions: Retinal imaging is a valuable adjunct in ROP management, supporting timely intervention and safe observation.

P A06 Outpatient and Tele-consultation Activity for Amblyopia and ROP in England: A Ten-year Analysis

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Objective of the study: Amblyopia and retinopathy of prematurity (ROP) are disorders for which dedicated screening Programs exist across many health settings. We describe a decade of national outpatient activity, examining trends in first attendances and changes in tele-consultation provision.

Materials and methods: Retrospective analysis using Hospital Episode Statistics (HES) outpatient activity dataset (2015-16 to 2024-25). Annual counts of first attendances and tele-consultations (first and subsequent) were extracted for amblyopia (ICD-10 H53.0) and ROP (H35.1). Pre- and post-pandemic values (2015-16 to 2019-20 vs 2021-22 to 2024-25) were compared using Mann-Whitney U; 2020-21 was excluded as a transition year.

Results: During the study period, first outpatient attendances rose from 65 to 830 for amblyopia and from 10 to 132 for ROP. Amblyopia attendances were relatively stable pre-pandemic and fell in 2020-21; ROP attendances were more variable pre-pandemic. Attendances for both rose sharply from 2021-22. First tele-consultations were absent before 2019-20, reaching 34 for amblyopia and 1 for ROP in 2024-25. Subsequent tele-consultations for amblyopia rose from 3 in 2019-20 to 99 in 2020-21, reaching 95 in 2024-25. ROP subsequent tele-consultations peaked at 10 in 2024-25. All comparisons were significant ($p \leq 0.033$).

Discussion: Recorded burden of paediatric screening-relevant vision disorders rose substantially with an approximately 13-fold increase in first attendances exceeding the 21% growth in overall NHS outpatient activity, suggesting an increase beyond service expansion, population growth or coding improvements. Tele-consultation activity emerged across all categories post-pandemic, rising sharpest for amblyopia follow-up, but volumes remained small overall, reflecting clinical constraints on new-patient contact and retinal examination.

Conclusion: These findings support expansion of clinical capacity to meet rising demand for disorders identified through whole or targeted population eye and vision screening, and the targeted use of follow-up tele-consultations to reduce burden of in-person hospital visits.

P A07 Laser Pointer Retinopathy: Red vs Green Laser Lesions and the Challenge of Incidental Detection

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Purpose: To delineate the clinical and imaging characteristics of non-therapeutic laser pointer-induced retinal injury in young children, with particular emphasis on red versus green laser exposure, and to underscore the increasing incidence of incidental detection during routine screening.

Methods: A retrospective case series comprising six children aged 7-13 years.

Results: Only one child reported a definite history of exposure to a 100 mW laser pointer purchased online. Most cases were identified incidentally during routine pediatric screening in otherwise asymptomatic or minimally symptomatic children. A consistent morphological pattern was observed, characterized by a sharply demarcated focal macular lesion, typically located in the foveal or parafoveal region. Optical coherence tomography revealed focal disruption of the outer retinal layers, including ellipsoid zone discontinuity, photoreceptor damage, and involvement of the retinal pigment epithelium. Both red and green laser exposures were implicated; however, lesions associated with presumed green laser exposure demonstrated full-thickness disruption with pseudocyst formation, whereas those linked to red laser exposure appeared more spatially confined while retaining the same sharply circumscribed morphology. All children had a history of playing with laser pointers.

Conclusion: Laser pointer-induced retinopathy in children represents an increasingly prevalent yet underrecognized condition, particularly among younger children unable to reliably report exposure. A small, sharply delineated focal macular lesion with corresponding outer retinal disruption constitutes a key diagnostic feature distinguishing it from inherited retinal disorders. Although regulations typically limit consumer laser pointers to low-power devices (≤5 mW), higher-powered devices (Class 3B) remain widely accessible online, often inaccurately labelled, despite being prohibited from sale as pointers. Enforcement of these regulations is inconsistent across jurisdictions, allowing such devices to remain readily available to the general public.

P A08 Clinical and Ophthalmic Features of Stickler Syndrome: A Case Series

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Introduction: Stickler syndrome (SS) is a genetic collagenopathy with variable phenotypic expression, including ocular findings as myopia, cataract, retinal detachment; conductive and sensorineural hearing loss; maxillofacial abnormalities and cleft palate either isolated or as part of Pierre Robin sequence; premature degenerative joint changes.

Case presentation: We present a retrospective case series of eight patients (5 males, 3 females) aged 4-39 years with clinically and genetically diagnosed Stickler syndrome. High myopia (over -6,00 D) was recorded in 62,5% of patients. Best-corrected visual acuity ranged from maintained fixation in younger patients to 0.9 in cooperative individuals. Vitreoretinal pathology was observed in 62,5%, including retinal detachment in 25%. Other retinal changes include retinoschisis, macular oedema, and peripheral retinal degeneration. Systemic manifestations were registered in 62,5% of patients, including hearing impairment in 25%, craniofacial abnormalities in 37,5%, and cardiac involvement in 12,5%. Pathogenic mutations in COL2A1 (60%), COL9A3, COL11A1 and combined COL2A1 and FZD4 gene mutation (autosomal dominant form of familial exudative vitreoretinopathy) were confirmed with genetic testing. Therapeutic interventions included laser photocoagulation (37,5%), pars plana vitrectomy (25%), and cataract extraction (12,5%).

Discussion: Stickler syndrome is the most common cause of familial retinal detachment and rhegmatogenous retinal detachment in children. The high frequency of myopia and peripheral retinal changes may serve as early diagnostic indicators. While ocular complications are common, affected individuals may also exhibit hearing loss, craniofacial and skeletal abnormalities. In contrast to most other forms of blinding genetic eye disease, blindness from retinal detachment in SS is largely avoidable with accurate diagnosis and prophylactic strategies.

Conclusions: Patients with SS have higher risk of early-onset vision-threatening vitreoretinal complications. Stickler syndrome is genotypically and phenotypically heterogenous, which can make correctly diagnosing individuals difficult. Early recognition and prophylactic strategies are crucial for altering the course of the disease and avoiding preventable visual loss.

P A09 Listen to the Other Side too! A Multidisciplinary Diagnostic Journey Towards Revesz Syndrome.

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Background: Revesz syndrome is an ultra-rare and severe variant of dyskeratosis congenita, classified as a telomere biology disorder. Its multisystem nature creates significant diagnostic complexity, often requiring collaboration across multiple specialties.

Objective: To illustrate how comprehensive, interdisciplinary teamwork — spanning ophthalmology, neurology, haematology, genetics, and patient-centered care — led to the diagnosis of Revesz syndrome in a pediatric patient, emphasizing the essential role of genetic testing and international collaboration.

Methods: A case study of a prematurely born child presenting with bilateral retinal detachment, severe thrombocytopenia, progressive neurological deterioration, and bone marrow failure. The diagnostic process involved detailed ophthalmological assessment, neuroimaging (MRI and CT), haematological investigations, and comprehensive genomic analysis via whole exome sequencing and targeted gene panels. International consultation with experts was pivotal in refining the differential diagnosis.

Results: Fundoscopic findings initially raised suspicion for Coats disease, retinoblastoma, or Coats Plus syndrome. Neuroimaging revealed widespread cerebral calcifications and cerebellar hypoplasia. Bone marrow biopsy confirmed aplastic anemia. Genetic analysis identified a de novo pathogenic variant in TINF2 (NM_012461.2:c.845G>A, p.Arg282His), confirming the diagnosis of Revesz syndrome. Given the high toxicity and limited survival benefit associated with bone marrow transplantation in telomeropathies, the multidisciplinary team elected for supportive treatment focusing on transfusion therapy, infection prevention, and ophthalmologic management with laser photocoagulation and anti-VEGF injections.

Conclusion: This case exemplifies the critical importance of integrating ophthalmologic, neurologic, hematologic, and genetic data in diagnosing complex telomere biology disorders. Bilateral exudative retinopathy in infants, particularly when accompanied by systemic features such as bone marrow failure and neurodevelopmental delay, should prompt consideration of Revesz syndrome. The involvement of the patient's family and support networks underscores the need for holistic, compassionate care. International collaboration proved instrumental in achieving a timely and accurate diagnosis, reinforcing the value of global networks in managing rare diseases.

P A10 Multimodal Imaging of Transient Macular Edema Associated with Congenital Retinal Macrovessel

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Introduction: Congenital retinal macrovessel (CRM) is a rare, congenital, and typically non-progressive vascular malformation characterized by a large aberrant retinal vessel crossing the central macula. Although usually benign and asymptomatic, CRM may occasionally be complicated by cystoid macular edema (CME) or retinal haemorrhage.

Case Presentation: A 13-year-old otherwise healthy and asymptomatic boy was referred following detection of retinal abnormalities during a routine eye examination. At presentation, visual acuity, color vision, and contrast sensitivity were normal and equal in both eyes. Anterior segment examination was unremarkable bilaterally. Fundus examination of the right eye revealed an enlarged inferior retinal venous arcade traversing the macular region. The patient underwent multimodal retinal imaging, including optical coherence tomography (OCT), fluorescein angiography, and fundus autofluorescence, all of which showed no evidence of vascular leakage or other complications at baseline. MRI brain scan with contrast excluded associated intracranial vascular abnormalities. At 10 months post presentation, he experienced a reduction in visual acuity in the right eye. Fundus examination demonstrated CME, which was confirmed on OCT imaging. Optical coherence tomography angiography showed no signs of neovascularization. Over the following two weeks, the CME resolved spontaneously without treatment. No recurrence was observed during the subsequent 8 months of follow-up.

Discussion: CRM is a rare, congenital, usually unilateral venous vascular malformation that has been linked with intracranial vascular malformations. It may be associated with complications such as CME or retinal haemorrhage. In many cases, macular edema is self-limiting and may not require treatment. Nevertheless, close and long-term monitoring is essential to allow prompt detection and management of potential complications. Multimodal imaging plays a crucial role in identifying and monitoring these complications and guiding clinical decision-making.

Conclusions: CRM is a rare congenital retinal vascular malformation that requires long-term follow-up to ensure early identification of complications and timely treatment when necessary.

P A11 Prognostic Models for Predicting Sight-Threatening ROP in Preterm Infants. A Systematic Review

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Purpose: To identify, describe and critically appraise studies developing and/or validating models for predicting sight-threatening retinopathy of prematurity (ROP) in preterm infants undergoing screening in neonatal intensive care units.

Methods: PubMed, Embase via-Ovid, trial registers and grey literature were searched from inception to 21 October 2025. Eligible studies included those that developed and/or validated prognostic models for sight-threatening ROP in screened preterm infants. Data extraction followed the CHARMS checklist. Reporting adhered to TRIPOD-SRMA and PRISMA guidelines. Model quality, risk of bias and applicability were assessed using PROBAST+AI. The protocol is available on Open Science Framework (https://osf.io/dgc4y).

Results: Thirty-five unique prognostic models for sight-threatening ROP were identified from 30 development studies. Gestational age, birth weight and postnatal weight gain were the most frequently reported predictors, followed by sex. Twenty-three models underwent at least one external validation (154 validations in total). Most development studies showed substantial methodological concerns, related to study design, handling of missing data, lack of external validation, and inadequate reporting of performance measures. Studies assessing model performance (apparent, internal, or external) were also at high overall risk of bias due to design, analytical, and reporting shortcomings. Collectively, these limitations may reduce the generalizability and clinical applicability of existing models.

Conclusion: Despite numerous ROP prediction models, methodological limitations and limited robust validation preclude widespread clinical adoption. Future research should prioritize development and prospective, multicenter validation across large, diverse cohorts, with strict adherence to established methodological and reporting standards (TRIPOD-AI, PROBAST+AI) to ensure reliable, generalizable tools for optimizing ROP screening.

P A12 Sudden Vitreous Haemorrhage in Children: Two Unusual Aetiologies

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Introduction: Vitreous haemorrhage in children is an uncommon but potentially vision-threatening condition with diverse aetiologies. While trauma and retinopathy of prematurity are among the more typical causes, rare underlying pathologies should also be considered. We present two paediatric cases of sudden vitreous haemorrhage with distinct and unusual causes.

Case Presentation: The first case involves a 15-year-old boy who presented with sudden, painless visual deterioration in one eye. Ophthalmic examination revealed dense vitreous haemorrhage obscuring fundus visualisation. B-scan ultrasonography suggested underlying retinal pathology. Further evaluation led to the diagnosis of juvenile retinoschisis as the cause of the haemorrhage. The patient was managed conservatively, with spontaneous resolution of the haemorrhage and good visual recovery. The second case describes a 9-year-old girl presenting with acute visual loss. Clinical findings indicated vitreous haemorrhage associated with a congenital anomaly. Imaging supported the diagnosis of persistent fetal vasculature (PFV). The haemorrhage was attributed to fragile persistent vessels. The patient was managed conservatively, with spontaneous resolution of the haemorrhage and favourable visual outcome.

Discussion: These cases highlight two rare causes of vitreous haemorrhage in children: juvenile retinoschisis and PFV. Both conditions may present with sudden visual impairment and pose diagnostic challenges, particularly when fundus visualisation is limited. Non-invasive imaging, especially B-scan ultrasonography, plays a key role in establishing the diagnosis. Recognition of these entities may support appropriate case selection for conservative management.

Conclusions: Sudden vitreous haemorrhage in paediatric patients requires careful evaluation for uncommon aetiologies. Awareness of rare conditions such as juvenile retinoschisis and PFV can facilitate timely diagnosis and appropriate management, optimising clinical decision-making and visual outcomes.

P A13 Early Manifestation of Stargardt Disease

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Introduction: Juvenile macular dystrophy of Stargardt or Stargardt disease is the most common type of autosomal recessive inherited macular degeneration. It is caused by biallelic mutations in the ABCA4 gene and the onset is mainly in childhood and adolescence, less often in adulthood. Stargardt disease leads to photoreceptor cells death and following macular dystrophy which is cause by a characteristic buildup of vitamin A byproducts in the photoreceptor cells. The main symptoms are progressive loss of visual acuity, photophobia, loss of color vision and central scotomas.

Case presentation: We present a case series of the result of 9 patients with early diagnosed Stargardt disease. All children were diagnosed before 7 years of age with main complaints of low visual acuity. An extensive opthalmic examination and specialized tests (Optic coherence tomography and Fundus autofluorescence) as well as a genetic examination were performed on all patients. Low visual acuity (the average, represented as logmar, was 0.8 for both eyes) and severe changes in the macula were found in all patients.

Discussion: The first clinical manifestations of Stargardt disease before the age of 7 are associated with severe macular pathology and very low visual acuity. Mutations in the ABCA4 gene were found in all patients, however more in-depth studies focusing on the specific mutations that lead to very early onset of the disease are needed.

Conclusions: Stargardt disease is one of the most common inherited retinal diseases and the most common juvenile macular dystrophy. The difference between the genetic defects can affect the speed of the loss of central visual functions, but the final outcome in all patients is severe loss of central vision with extreme disability.

P A14 Visual Outcome in Prematurely Born Children

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Introduction: Premature birth is increasingly recognized as an independent risk factor for altered visual development, even in infants who do not develop retinopathy of prematurity (ROP). Although ROP remains the most severe ocular complication, studies show that preterm children without ROP also have a higher incidence of reduced visual acuity compared to term-born peers.

Aim: This study aims to compare the incidence of amblyopia or visual impairment in prematurely born children with and without ROP.

Methods: We retrospectively reviewed the medical records of 59 children of verbal age born before 32 weeks of gestation. Group 1 included 33 children without ROP, while Group 2 consisted of 26 children diagnosed with ROP.

Results: Decreased best-corrected visual acuity (BCVA) in at least one eye was observed in 39.4% of children in Group 1 and 76.9% in Group 2. Refractive errors were present in 66.7% of children without ROP, most commonly astigmatism, followed by hypermetropia and myopia. In contrast, 96.2% of children with ROP exhibited refractive errors, with higher rates of astigmatism and myopia. Orthoptic abnormalities were also common. In Group 1, 45.5% of children showed ocular deviation, including heterophoria, exotropia, esotropia, and vertical deviations. In Group 2, deviations were present in 53.8% of patients, with esotropia being the most frequent finding.

Conclusion: The incidence of visual abnormalities in prematurely born children appears higher than in the general population but lower than in children with ROP. However, the sample size limits statistical significance. Further research is required to clarify the independent impact of prematurity-related factors on visual development.

P A15 First Successful Treatment of ROP with Intravitreal Aflibercept (Eylea) in Albania: A Case Report

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Abstract Background: Retinopathy of prematurity (ROP) is a potentially blinding vasoproliferative retinal disorder affecting premature infants. Anti-vascular endothelial growth factor (anti-VEGF) therapy has emerged as an alternative to laser photocoagulation in selected cases. Aflibercept (Eylea) has shown promising results in severe ROP, but its use in many regions remains limited.

Case Presentation: We report the first documented case in Albania of a premature infant diagnosed with ROP type I who was successfully managed with an intravitreal injection of aflibercept (Eylea). The patient was born prematurely and developed progressive retinal vascular immaturity consistent with severe ROP during routine screening. Given the disease stage and anatomical findings, intravitreal anti-VEGF therapy was chosen as the primary treatment modality.

Discussion: A single intravitreal injection of aflibercept was administered under sterile conditions. The infant was closely monitored with serial fundoscopic examinations. A rapid regression of neovascular activity and retinal disease was observed, with progressive vascularization of the peripheral retina and no immediate ocular or systemic complications noted during follow-up.

Conclusion: This case highlights the successful use of intravitreal aflibercept in the management of severe ROP and represents the first reported case treated with Eylea in Albania. It supports the potential role of anti-VEGF therapy as a safe and effective alternative treatment option in carefully selected premature infants, while emphasizing the need for long-term follow-up to monitor ocular development and systemic safety.

P A16 Unusual Bilateral Maculopathy with Good Vision. Case Report

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Laser related eye injuries have become increasingly common, particularly among children and teenagers due to poor awareness of risks and complications of laser pointers among the adult population. A 9-year-old boy presented to the clinic for a complete ophthalmological evaluation, complaining of low visual acuity in his right eye. The patient's best corrected visual acuity was 20/25 in the right eye and 20/20 and left eye. He had normal intraocular pressure and normal cycloplegic refraction. Fundus examination revealed yellow sub foveal scarring in both eyes and hyper-reflecting material in the fovea, corresponding to disruption of the foveal ellipsoid zone on optical coherence tomography imaging in both eyes, with a lower foveal thickness in the right eye. Juvenile macular dystrophy was suspected. Full-field electroretinography had normal tracings. Genetic testing for macular dystrophies did not reveal any relevant variants. Parents were also tested, only the father has a recessive gene. Further questioning raised the suspicion that the foveal damage to be laser pointer retinopathy secondary to extended laser pointer viewing. Two years after presentation, the patient's clinical condition remains stable; he is monitored periodically, including with OCT angiography, to detect any possible complications, such as the development of a choroidal neovascular membrane.

P A17 Toxoplasma Retinochoroiditis Recurrence in the Fellow Eye- Case Report

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Ocular toxoplasmosis is the most common cause of infectious retinochoroiditis worldwide. Relapses can occur, typically as satellite lesions around a pre-existing scar. This is a report of a case of recurrent toxoplasma rethinochoroiditis in a 8 year old immunocompetent patient, already known to the practioner for a sensory exotropia due to a congenital toxoplasma retinal scar in the fellow eye. With prompt diagnosis and treatment the visual acuity was restored.

P A18 Post-Infectious Retinal Vascular Occlusion in an Adolescent: A Rare but Urgent Ophthalmic Pathology

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Introduction: Retinal vascular occlusion is a major ophthalmic emergency, characterized by sudden and severe vision loss. Although it is commonly encountered in elderly patients, in pediatric patients it represents a rare pathology, frequently correlated with systemic conditions, including infectious, inflammatory, or coagulation disorders. Purpose: To highlight the clinical, practical, and etiological aspects of retinal vascular occlusion in an adolescent patient.

Materials and Methods: We report the case of a 15-year-old patient who developed sudden and severe decrease in visual acuity in the right eye, occurring after several days of persistent fever, unresponsive to antipyretic therapy. On initial examination, visual acuity was: OD= “zero”,OS = 1.0. Fundus examination of OD revealed diffuse retinal pallor, associated with a characteristic macular “cherry-red spot,” along with venous changes (irregular course, venous stasis), peripheral flame-shaped haemorrhages, and papilledema with blurred margins and congested vessels, suggestive of retinal vascular occlusion. Imaging investigations, including OCT, confirmed severe ischemic retinal changes. The preceding febrile episode raised suspicion of a systemic pathology, leading to an extensive evaluation. Laboratory testing did not reveal coagulation disorders, vasculitis, or autoimmune processes, and additional imaging studies failed to identify a definitive systemic cause.

Conclusions: Retinal vascular occlusion in adolescents is a rare but a potentially vision-threatening condition that requires prompt diagnosis and comprehensive etiological assessment. Beyond its acute visual impact, this pathology may reflect underlying systemic mechanisms with significant implications for overall prognosis. Early identification of a systemic cause is essential not only for ophthalmologic management but also for the prevention of potentially severe systemic complications. An interdisciplinary approach and extensive evaluation are crucial for establishing an accurate and complete diagnosis. Management remains challenging due to limited therapies, making early diagnosis and individualized treatment essential for visual recovery and complication prevention.

P A19 Dexamethasone as a First-Line Treatment for Type 2 Retinopathy of Prematurity – 2,5 Years Follow Up

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Objective: To investigate the safety and long-term effects of dexamethasone eye drops as a treatment for type 2 retinopathy of prematurity (ROP) at 2,5 years of age.

Materials and methods: This register-based study included all 64 children in the southern region in Sweden with severe ROP in two different time periods: 2015-2018 and 2020-2021. In the later period dexamethasone eye drops were used to treat type 2 ROP, which drastically reduced the need for laser and/or anti-VEGF. Data was collected from the Swedish quality register for ROP (SWEDROP) from the follow-up at 2,5 years of age. Visual acuity (VA), refraction in cycloplegia, and ocular abnormalities were compared between the two groups.

Results: Fifty-five of 64 children participated in follow-up examinations. Among the children tested with visual chart symbols, the median VA was 0.3 (n=14) versus 0.4 (n=19) p=0,459 for the untreated and treated group respectively. Myopia in any eye was found in 12/28 (43 %) versus 4/24 children (17 %, p=0.041), and the number of children with visual impairment was three versus zero. No cataracts were detected among the children receiving dexamethasone.

Discussion: Dexamethasone eye drops for type 2 ROP seem to be a safe treatment, easily accessible, cheap and could provide improvement in the care for premature infants with severe ROP worldwide. Further studies on ocular and systemic outcomes at an older age are needed to establish the safety of this promising new treatment.

Conclusion: Our findings indicate that dexamethasone for type 2 ROP carries no negative ocular side effects at 2,5 years of age. The group treated with dexamethasone had less myopia, no visual impairment, and a tendency towards better visual outcome.

P A20 Caregivers' perspective on newborn-focused screening for retinopathy of prematurity

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Objective: The present study aims to analyse real-life experiences of the Newborn Individualized Developmental Care and Assessment Program (NIDCAP)-adapted retinopathy of prematurity (ROP) screening with digital wide-field photography from the caregivers' perspective.

Materials and methods: This qualitative study is based on interviews with caregivers of preterm infants at Skåne University Hospital who have attended at least three ROP screenings. Screening was conducted with the caregiver present and holding the infant. A neonatal nurse planned and adapted the examination and operated the camera (RetCam), while a pediatric ophthalmologist acquired the images. Music therapy was offered during the screening. Caregivers were consecutively included over a period of one year. Semi-structured interviews regarding caregiver experiences were analysed with qualitative content analysis.

Results: Preliminary results were based on interviews with 19 parents from 12 families of varying ethnical background, (12 women, 7 men), aged 28-52 years, with infants born at gestational week 23-33. Interviews lasted 19-71 minutes. In five families, two caregivers were interviewed together. Nine participants were parents of twins. Caregivers described anticipatory stress related to possible outcomes and experienced the screening itself as stressful. They appreciated having an active role during the procedure and that the infants' condition was the primary focus. Music therapy during screening was described as valuable, helping the caregiver to be present with the child and reducing stress. Infant reactions affected experiences.

Discussion: Preliminary results confirm prior research indicating that parents may experience ROP screening as stressful. Partnering with them in the procedure is appreciated, experienced as beneficial to infants, and in line with NIDCAP. Reducing procedural stress in infants is important to minimize negative effects on brain development.

Conclusion: The preliminary results of this study may support future implementation of NIDCAP-adapted ROP screening with the preterm infant in focus and the caregivers given an active role.

P A21 Late Peripheral Retinal Vascular Changes in Premature Infants.

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Objective of the study: Prematurely born infants are at risk for retinal vascularization disorders – peripheral retinal vessels develop in the last weeks of life. The earlier a child is born and the lower their birth weight, the greater the risk of developing these disorders.

Materials and methods: We present the characteristics of these disorders using examples, fundus pictures and AFL from prematurely born patients, both with advanced retinopathy of prematurity after treatment and after spontaneous regression of the lesions. Results Retinopathy of prematurity is a primary disorder, appearing shortly after birth. Depending on the stage of progression, it may require treatment (laser therapy, anti-VEGF administration) or regress spontaneously. Regardless of this, vascular abnormalities may develop in the peripheral retina, such as proliferation with a persistent ridge or demarcation line, arteriovenous connections, or persistent avascular retina in the far periphery.

Conclusions: Vascular or fibrotic changes visible in the periphery require further diagnostics, including fluorescein angiography and laser therapy of avascular areas. Peripheral retinal examination in children aged 1-2 years is difficult and may sometimes require examination under general anaesthesia with a thorough assessment of the periphery and AFL. Current research in premature infants emphasizes late changes in the peripheral retina and choroid, and the complications associated with them.

P B22 Capsulotomy with Supine Nd:YAG Laser in Children

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Objective of the study: To evaluate the safety and visual outcomes of supine Nd:YAG laser posterior capsulotomy under general anaesthesia in children with visual axis opacification (VAO) following cataract surgery.

Materials and methods: This retrospective case series included children with significant VAO following congenital, uveitic, or juvenile cataract surgery who were unable to undergo the standard seated procedure under topical anaesthesia. Between 2019 and 2025, patients underwent posterior capsulotomy using a supine Nd:YAG laser system (MR Q SUPINE, Meridian Medical) under general anaesthesia with either laryngeal mask airway or endotracheal intubation.

Results: The study included 13 eyes of 9 children. The median age at treatment was 9.1 years, and the median follow-up was 23.8 months. The mean number of laser pulses per eye was 77.8 ± 41.8, and the mean total energy delivered was 115.3 ± 65.6 mJ. Best corrected visual acuity (Snellen) improved significantly from 0.27 ± 0.26 preoperatively to 0.46 ± 0.39 postoperatively ($p = 0.002$). Recurrent VAO requiring secondary Nd:YAG capsulotomy developed in 3 eyes (23 %). Transient postoperative intraocular pressure elevation occurred in 2 eyes (15 %) and resolved with topical treatment. No other complications were observed.

Discussion: In paediatric patients with limited cooperation, patient positioning, rather than the laser application itself, is the main technical challenge during standard seated laser treatment. The supine approach enables safe and efficient treatment, with visual outcomes comparable to those reported with the standard seated procedure.

Conclusions: Supine Nd:YAG posterior capsulotomy under general anaesthesia is a useful additional method for managing VAO in children after cataract surgery.

P B23 Early Genetic Diagnosis of CHRDL1- Related Megalocornea in a Child

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Introduction: Megalocornea is a rare congenital anterior segment anomaly characterized by bilateral corneal enlargement, deep anterior chambers, and usually normal intraocular pressure. In infants with large clear corneas, distinction from primary congenital glaucoma and corneal ectatic disorders is clinically important.

Case presentation: We represent a boy referred at 5 months of age because of visibly enlarged eyes. Examination showed bilateral large clear corneas, white-to-white corneal diameters of 15 mm in both eyes, deep anterior chambers, clear lenses, normal posterior segment findings, and intraocular pressure of 12–15 mmHg. Lower-lid entropion with lash touch caused punctate epithelial defects. Electrophysiology was normal. At 28 months, the condition remained stable, visual acuity was 0.7–0.8 unaided in each eye, and mild bilateral myopia was present. Initial clinical assessment also suggested a keratoglobus-like appearance. Genetic testing identified a hemizygous pathogenic CHRDL1 variant, c.652C>T, p.(Arg218T*), confirming X-linked megalocornea.

Discussion: CHRDL1-related megalocornea should be considered in children with bilateral large clear corneas and normal intraocular pressure. Genetic confirmation refines the differential diagnosis, avoids misclassification as congenital glaucoma, supports family counselling, and guides surveillance for later complications including lenticular changes, cataract, corneal degeneration, and secondary glaucoma.

Conclusion: Early recognition of the phenotype, followed by molecular confirmation, enables accurate diagnosis and long-term ophthalmic follow-up in this rare disorder. This abstract is aligned with the current literature describing isolated congenital megalocornea as a bilateral, usually nonprogressive anterior segment disorder with deep chambers and normal IOP, most often linked to loss-of-function variants in CHRDL1

P B24 Beyond the Obvious: Pediatric Iris Pseudometastasis and the Value of Multidisciplinary Collaboration

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Introduction: Diagnosing iris lesions in children poses a significant challenge to clinical reasoning, particularly when a known oncological history prompts premature closure. We present a case that demonstrates the educational value of multidisciplinary discussion and histopathological confirmation when iris metastasis is suspected in a child.

Case presentation: A 4-year-old girl with nephroblastoma, in complete remission after intensive chemotherapy, presented with metastatic lung relapse. Following a period of five months of chemotherapy, she presented with a case of febrile aplasia. This was accompanied by a painful redness of the left eye, ankle arthralgia, an abdominal nodule and parotid adenitis. Slit-lamp examination revealed the presence of anterior granulomatous uveitis, accompanied by hyphema, synechiae, retrocorneal precipitates, and a vascularised iris nodule. Ultrasound biomicroscopy showed an isoechoic stromal growth; MRI demonstrated contrast enhancement of both the iris lesion and the head of the caudate nucleus, interpreted as metastases. The ophthalmic oncology committee concluded to iris metastasis and advised against biopsy because of tumor-seeding risk. However, paediatric oncologists have expressed reservations about this hypothesis, arguing that a complete response to chemotherapy makes the occurrence of new metastases less likely. This led to a surgical biopsy. Histopathological analysis revealed pyogenic granulomatous inflammation, confirming the absence of malignancy. The final diagnosis was multifocal infectious pyogenic granulomatosis (iris, skin, parotid, brain) during febrile aplasia.

Discussion: This case offers key educational insights. Interdisciplinary disagreement can act as a challenge to the diagnostic process. When considering the potential risks of a biopsy, these must be balanced against the cost of an incorrect diagnosis, particularly when clinical signs are misleading.

Conclusion: This case offers a valuable lesson in avoiding cognitive bias and highlights the importance of multidisciplinary collaboration and histopathological confirmation in the field of paediatric ophthalmic oncology.

P B25 Recurrent Corneal Epithelial Erosions as a Presenting Feature of Shprintzen-Goldberg Syndrome

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Introduction: Shprintzen-Goldberg Syndrome (SGS) is an exceptionally rare (<1 in 1 million) systemic connective tissue disorder caused by mutations in the SKI gene. While it shares phenotypic overlap with Marfan and Loeys-Dietz syndromes—including craniosynostosis, skeletal abnormalities, and cardiovascular risks—ophthalmic manifestations are less frequently documented beyond high myopia and proptosis. We report a pediatric case in which recurrent corneal epithelial erosion (RCEE) was the presenting ophthalmic finding.

Case Presentation: A 2-year-old male with Shprintzen-Goldberg Syndrome (SGS) presented to the pediatric emergency department with acute photophobia, tearing, and red eye. Clinical examination revealed a corneal epithelial erosion in the right eye. The patient had subtle dysmorphic features, including dolichocephaly and arachnodactyly. Although the necessary treatment was provided, the corneal ulcer persisted in the right eye. During the follow-up period a spontaneous epithelial erosion was seen in the fellow eye, while the mother insisted it was not of traumatic etiology.

Discussion: The recurrent epithelial erosions suggested an underlying basement membrane instability or corneal collagen fragility potentially linked to the SKI-related TGF-beta pathway dysregulation. This case highlights the importance of recognizing systemic syndromes in pediatric patients presenting with "common" ophthalmic complaints like recurrent epithelial erosions. Early genetic confirmation of SGS is critical for managing potential life-threatening aortic complications and provides a broader understanding of the role of the SKI gene in ocular surface integrity.

Conclusion: This case contributes to the general phenotype of Shprintzen-Goldberg Syndrome (SGS), and suggests a possible role of the SKI gene in corneal epithelium health and homeostasis.

P B26 Clinical Characteristics and Outcomes of Pediatric Non-Infectious Anterior Uveitis

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Purpose: To describe the clinical characteristics, management, and outcomes of pediatric non-infectious anterior uveitis (NIU) in a tertiary referral center, with a focus on response to biologic therapy in real-world practice.

Methods: A retrospective observational cohort study was conducted including 63 pediatric patients (≤18 years) with NIU. Demographic, clinical, immunological, and treatment-related variables were collected. Treatment patterns and outcomes, including response to adalimumab, were analysed. Treatment failure was defined as the occurrence of more than one uveitis flare during biologic therapy. Time-to-event outcomes were evaluated using Kaplan–Meier survival analysis.

Results: The cohort was predominantly female (77.8%), with a median age at onset of 5.7 years. Juvenile idiopathic arthritis (JIA), particularly the oligoarticular subtype, was the most frequent etiology (43.5%), followed by idiopathic NIU (35.5%). Bilateral involvement at presentation was observed in 44.4% of cases.

Most patients required systemic treatment, with 65.1% receiving biologic therapy. Adalimumab was the first-line biologic agent in all cases. Treatment failure occurred in 41.5% of patients receiving adalimumab, highlighting a higher rate than reported in clinical trials. The probability of maintaining treatment response decreased progressively over time, with the first failures observed at approximately 20 months.

Despite the high rate of biologic use, visual outcomes were favourable, with stable visual acuity and low rates of structural complications (12.7%) during follow-up. The median time to escalation to second-line biologic therapy was approximately 5 years. No independent clinical or demographic factors were identified as predictors of treatment failure.

Conclusions: Pediatric NIU in our cohort shows a high need for biologic therapy but overall favourable visual outcomes. The relatively high rate of treatment failure to adalimumab in real-world practice underscores the need for improved therapeutic strategies and predictive biomarkers.

P B27 Clinical Characteristic of Childhood Cataract in Bulgaria

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Objective: To present the clinical characteristics and demonstrate our experience in managing pediatric cataract in Bulgarian childhood patients.

Materials and methods: A retrospective analysis of medical records of all children diagnosed with pediatric cataract for an 8-year period (January 2018 to December 2025) was conducted. Demographic data, bilaterality, morphology of cataract, age at surgery and surgical approaches were evaluated.

Results: Our data consists of 72 children (111 eyes). Of those, 44 were male (61.1%) and 39 children were diagnosed with bilateral pathology. Morphologically, 63 cataracts were classified as total (56.8%) and 48 as partial (43.2%). Among partial cataracts, the distribution was as follows: 14 nuclear (29.2%), 10 zonular (20.8%), 6 posterior capsular (12.5%), cortical 6 (12.5%) and 5 posterior subcapsular (10.4%). All children underwent surgical treatment. The mean age at surgery was 5 years and 3 months (range 2 months – 17 years). In terms of the surgical approach, 12 children (21 eyes) underwent parsplana lensectomy with secondary lens implantation. The mean age at lensectomy was 8 months and 6 days (range 3 months – 1y 9m), while the mean age at secondary implantation was 3 years (range 1y 10m – 5y 3m).

Discussion: Our analysis shows a predominance of the total lens opacities and male patients, as well as late identification of childhood cataract patients in some regions in Bulgaria. Late diagnosis and respectively surgical treatment of childhood cataract could lead to poor visual outcomes even after surgery due to deprivation amblyopia. Therefore, national screening Programs are crucial for timely diagnosis, treatment and visual rehabilitation.

Conclusion: Early surgical intervention, combined with tailored approaches and aggressive amblyopia therapy remain critical for optimal visual outcomes.

P B28 Secondary Glaucoma in Children with Peters Anomaly

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Introduction: Peters anomaly is a rare congenital disorder – one of the most common anterior segment dysgenesis of the eye. It may occur sporadically or be a result from a mutation in one of several genes, most commonly PITX2 and PAX6. The condition is typically characterized by central corneal opacity with iridocorneal and/or keratolenticular adhesions.

Case presentation: We present two clinical cases of a 6-year old girl and a 15-year old female. Both patients were diagnosed before the age of 1 with monocular anterior segment abnormalities – central corneal opacity and iridocorneal adhesions. In this study both patients suffer from elevated intraocular pressure (IOP) as a result from the anterior segment malformation. They administer topical ocular antihypertensive treatment to lower the IOP. No systemic manifestations were identified in our patients.

Discussion: Three clinical forms of the disease are known - Peters anomaly type I, Peters anomaly type II, and Peters Plus syndrome. The first two forms are primarily limited to ocular manifestations, whereas Peters Plus syndrome is associated with additional systemic abnormalities. Our patients have monocular involvement, nevertheless Peters anomaly presents mainly with bilateral asymmetric involvement. As a result of the anterior segment changes, the patients suffer from deprivation amblyopia and secondary glaucoma – two complications that were observed by us.

Conclusions: Glaucoma in childhood unites a broad spectrum of diseases. It is of high importance that medical professionals are acquainted with the different forms of glaucoma, especially in young individuals. This would result in a successful diagnosis, correct treatment and a positive outcome for the patients.

Key words: peters anomaly, glaucoma, secondary glaucoma, childhood glaucoma

P B29 From Digital Exposure to Diagnosis:AI-Assisted Analysis in Pediatric Ocular Surface Dysfunction

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Introduction: Digital device exposure is rapidly increasing among children, translation of behavioural risk into objective ocular surface diagnostics still remains limited. A 2025 national screening across four regions in Bulgaria, including over 400 schoolchildren (7–18 years), demonstrated high digital exposure, declining parental control with age and a significant prevalence of ocular symptoms. Behavioural stratification using a Digital Behavioural Risk Score (DBRS) revealed increasing symptom burden across cumulative risk categories. Building upon these findings, the present study aims to develop an AI-assisted diagnostic framework linking digital exposure to objective tear film instability in children.

Materials and methods: An ongoing prospective pilot study is being conducted in children with significant daily screen exposure. Participants undergo a standardized 2-minute near digital task with video recording and ocular surface assessment. AI-assisted video analysis is used to extract blink metrics, including blink rate, incomplete blink percentage and interblink interval. These parameters are integrated into a proposed Digital Blink Suppression Phenotype (DBSP), representing a behaviourally mediated blink response to sustained digital engagement. Non-invasive tear break-up time is measured as an objective marker of tear film stability. A multivariable logistic regression model is being developed to evaluate the association between AI-derived blink features, behavioural risk profile, and tear film instability.

Results: The preceding national screening established the epidemiological and behavioural basis for this approach. Ongoing data acquisition suggests measurable variability in blink dynamics during digital engagement, supporting the feasibility of objective blink phenotyping in children.

Discussion: This approach shifts the paradigm from descriptive associations toward functional, behaviour-driven diagnostics. By using digital exposure as a controlled stimulus, AI-assisted blink analysis may provide an objective link between behavioural patterns and ocular surface dysfunction.

Conclusions: AI-based blink phenotyping may enable scalable, behaviour-driven screening and early identification of tear film instability in children, transforming digital exposure into a clinically relevant diagnostic tool.

P B30 Bullous Keratopathy Associated with Refractory Primary Congenital Glaucoma

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Introduction: Corneal abnormalities in primary congenital glaucoma (PCG) range from Haab striae and edema to endothelial dysfunction and bullous keratopathy. Mutations in the CYP1B1 gene have also been associated with intrinsic endothelial alterations ("CYP1B1 keratopathy"), contributing to corneal decompensation despite intraocular pressure (IOP) control.

Case Presentation: We present a child with infantile PCG who underwent bilateral superior trabeculotomy, followed by inferior trabeculotomy and implantation of a PreserFlo MicroShunt with mitomycin C in the left eye due to refractory disease. Progressive corneal decompensation subsequently developed. At 3 years of age, the child presented with photophobia, tearing and recurrent ocular discomfort. Examination revealed central corneal edema with epithelial bullae, microcysts and endothelial folds, consistent with bullous keratopathy. Initial treatment with therapeutic contact lens and topical 5% sodium chloride achieved only transient improvement because of repeated lens dislodgement. Stromal micropuncture combined with amniotic membrane transplantation was therefore performed. At last follow-up, the child was asymptomatic, with no recurrence of bullae or epithelial defects. The cornea showed a central leukoma and visual acuity was light perception. IOP was 26 mmHg under examination under anaesthesia using Perkins applanation tonometry, as rebound tonometry was considered unreliable due to marked corneal irregularity.

Discussion: Pediatric bullous keratopathy is difficult to manage, particularly in eyes with severe congenital glaucoma. Conservative therapies often provide only temporary relief. When keratoplasty is not feasible, stromal micropuncture and amniotic membrane transplantation may provide symptomatic relief and improve epithelial stability. Repeated intraocular surgeries and possible CYP1B1-associated endothelial dysfunction may contribute to severe corneal decompensation in these patients.

Conclusions: Bullous keratopathy is a severe late complication of refractory PCG. Stromal micropuncture combined with amniotic membrane transplantation may provide effective symptomatic relief and ocular surface stabilization in pediatric eyes with limited visual potential.

P B31 Management of a Unilateral Congenital Cataract Case Associated with Convergence Excess Esotropia

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Unilateral congenital cataract cases have a poorer prognosis for the recovery of functional visual acuity despite early cataract surgery. Strabismus is a frequent associated condition in unilateral congenital cataract, even in cases where visual acuity is good.

We present a clinical case of a patient who had congenital cataract at 2 months old who was promptly treated with appropriate optical correction and occlusion. Although his visual acuity is his eye was 20/20 he developed convergence excess esotropia, which is successfully managed with multifocal correction.

Early surgical treatment of congenital cataracts, adequate optical correction, frequent examination and prompt management of any associated disturbances combined with patient adherence to occlusion can lead to excellent functional results.

P B32 Paediatric Mitomycin C intravascular chemoembolization: A case series

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Mitomycin C intravascular chemoembolization (MICE) is a relatively novel and effective treatment for corneal neovascularisation. We describe two cases of paediatric patients with corneal vascularisation secondary to blepharokeratoconjunctivitis who were treated successfully with MICE, highlighting the safety and efficacy of this procedure in the paediatric population.

In the paediatric setting, there is limited literature available about the management of corneal neovascularisation and there is no published data on the use of MICE in paediatric patients.

P B33 Sturge-Weber Syndrome - Case presentation

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Introduction: Sturge-Weber Syndrome, or encephalotrigeminal angiomatosis, represents a neurocutaneous condition, which includes agiomas in the leptomeninges and in the face, in the distribution territory of the ophthalmic and maxillary branch of the 5th nerve.

Methods: We report a short series of patients with Sturge-Weber Syndrome. All cases showed ophthalmological, neurological and cutaneous manifestations (nevus flammeus). Among the ophthalmic manifestations, secondary glaucoma and choroidal haemangioma were present in all cases. Two children have myopic shift and one has strabismus.

Results: To lower intraocular pressure, topical hypotensive treatment was initiated. Visual acuity improved with optical correction in all cases. Strabismus required surgery, and the choroidal hemangioma is followed by fundus eye examinations and serial photos.

Conclusion: Sturge-Weber syndrome can induce eye complications, the most feared being secondary glaucoma which, if not discovered and treated as early as possible, can cause glaucomatous optic atrophy with permanent vision loss.

P B34 MIGRATORY SERPIGINOUS CORNEAL EPITHELIOPATHY- A PEDIATRIC CLINICAL CASE REPORT

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Objectives: Migratory Serpiginous Corneal Epitheliopathy is a unilateral corneal disease characterized by serpiginous or amoeboid-shaped elevations of the corneal epithelium. The purpose of this paper is to report the case of a 17 years-old-girl patient, with no history of trauma, not contact lenses wearer, diagnosed with a mysterious form of keratopathy.

Materials and methods: The patient is brought to multiple eye examinations for intense pain and irritation in the left eye, but with minimal findings, right eye -any pathological findings and with 10/10 visual acuities- both eyes. Almost in all presentations (80) the slit lamp examination pointed out as the main finding only a sub-epithelial lesion in L.E, in a horse-hoe shape, without fluorescein staining, associated with blepharitis and meibomitis. One time it was interpreted like a „Wessely ring" in an immune reaction to staphylococcal toxins and treated consequently for a month with general and local therapy.

Results: After one month treatment, the lesion apparently disappeared (sustained by normalization of the subepithelial nerves in the presence of reduced inflammatory cells on confocal microscopy), but 4 days later a new ophthalmological exam revealed the re-occurrence of the lesion, with a different shape from the initial. Corneal scrapings did not show any microorganism and culture was negative. Despite the initial diagnosis, now it was reconsidered. Histological examination showed rare dyskeratotic cells that were in a distribution that fits the clinical images. Further staining with special stains did not reveal any specific abnormality. There were no other changes but this would be in keeping with migratory serpiginous corneal epitheliopathy. The curative treatment for this unknown lesion was the second alcohol delamination of the corneal epithelium covering the entire demarcation line and the corresponding limbus.

Conclusions: We describe a possible new entity, recently quoted in literature, unilateral migratory serpiginous corneal epitheliopathy, with inconspicuous inflammation.

P B35 Are we Patching too much: the Pitfalls of Late Onset Diplopia

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Introduction: Occlusion therapy (patching) is a well established treatment for amblyopia. While historically used to maximise visual acuity in the weaker eye, used over-sparingly, it may carry with it certain pitfalls which are becoming increasingly recognised in clinical practice.

Case presentation: We discuss three patients that presented in adulthood with troublesome diplopia. Each had childhood onset Esotropia and underwent intense patching in childhood followed by squint surgery. Each had equal and excellent vision in both eyes. Features of DVD and DHD were seen in 1 patient and all had small residual esotropia with Anomalous Retinal Correspondence. Management of symptoms has proven to be difficult and with a variety of methods including squint surgery, botox and occlusive contact lens.

Discussion: Abnormal retinal correspondence (ARC) is a sensory adaptation that can occur in individuals with strabismus, where the brain remaps visual input so that the misaligned eyes can still work together without causing double vision. Instead of the fovea of each eye corresponding with each other, the brain assigns a non-foveal point in the deviated eye to match the fovea of the straight eye. This allows for some degree of binocular single vision despite the strabismus present. It often develops in childhood when the visual system is still flexible, and it can make later treatment of strabismus more challenging, as restoring normal alignment does not always restore normal sensory correspondence.

Conclusion: In their zeal for achieving equal vision, most orthoptists often advocate for rigorous patching. However, it is important to be mindful of late presentations with intractable and often hard to manage diplopia.

GROUP C: Neuro-Ophthalmology and Ophthalmic Genetics (Day 2, 10:50 - 11:20)

Moderators: A. Grigorescu (Romania), S. Valeina (Latvia)

P C35 Septo-optic Dysplasia - Two Clinical Cases

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Introduction: Septo-optic dysplasia (SOD) is a rare congenital disorder characterized by a classical triad: bilateral optic nerve hypoplasia (ONH), midline brain abnormalities, and hypothalamic–pituitary dysfunction. In reality, though, most patients don't present with the full triad, which makes diagnosis inconsistent and often delayed. Septo-optic dysplasia is believed to have a genetic basis in many cases - most notably, mutations in the HESX1 gene have been strongly associated with SOD. In clinical practice, we see patients with reduced visual acuity, nystagmus, and sometimes even complete blindness.

Case presentation: We present two patients with SOD. The first clinical case involves a 6-month-old infant with bilateral optic nerve hypoplasia, poor visual fixation, and a fine rotatory nystagmus. After the diagnosis of bilateral ONH, the child is referred for a magnetic resonance imaging (MRI) scan, where changes in the central nervous system (agenesis of corpus callosum, septum pellucidum and the pituitary gland) are identified. The patient needs to be followed up by an ophthalmologist, a neurologist and an endocrinologist. The second clinical case involves an 8-month-old infant admitted for the first time due to poor fixation. Ophthalmologic examination revealed bilateral optic nerve hypoplasia, and a MRI confirmed agenesis of septum pellucidum without pituitary involvement. The child is improving visual attention during ophthalmology and neurologic examination. Regular neurological and endocrinological follow-up is not required.

Discussion: These cases demonstrate the broad multisystem involvement seen in septo-optic dysplasia. The early appearance of low vision function due to optic nerve hypoplasia can be key indicators that prompt further investigation for SOD. Early recognition of these signs is vital, allowing for prompt diagnosis, genetic evaluation, and coordinated multidisciplinary care.

Conclusion: Septo-optic dysplasia is a complex multisystem condition. Although treatment currently focuses on supportive care, early diagnosis is essential for vigilant monitoring of visual, endocrine, and neurological complications.

P C36 OPA1: One Gene, Many Faces?

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Introduction: OPA1 is a nuclear gene encoding a mitochondrial protein that plays a key role in mitochondrial fusion and structural integrity. It is expressed in many tissues, with particularly high levels in the retina, reflecting the high metabolic demands of retinal ganglion cells. Mutations in the OPA1 gene are the primary cause of autosomal dominant optic atrophy (ADOA).

Case report: We report four patients from two families (mother–child pairs): one with a typical presentation of ADOA and another with an unusual manifestation that, to our knowledge, has not been previously reported.

In the first family, a mother–daughter pair, both carrying an OPA1 mutation, presented with a typical phenotype of autosomal dominant optic atrophy - the child showed bilateral optic nerve atrophy, while the mother was an asymptomatic carrier.

In the second family, a mother–son pair, both carrying an OPA1 mutation, presented with an atypical phenotype. The child had reduced visual acuity and presented with cone dystrophy, without evidence of optic nerve damage. The mother was an asymptomatic carrier with no clinical manifestations.

Discussion: The presented cases demonstrate the phenotypic variability associated with OPA1 mutations, even within the same family. While OPA1 is classically associated with ADOA, our findings suggest that it may also be linked to retinal phenotypes such as cone dystrophy or be without any clinical manifestations.

Conclusion: More research is needed to better define the role of OPA1 mutations in retinal diseases and their potential link to cone dystrophy.

P C37 Ocular Clues to a Rare Diagnosis: NF2-Related Schwannomatosis in a Child

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Introduction: NF2-related schwannomatosis (NF2-SWN) is a rare autosomal dominant disorder characterized by the development of multiple schwannomas, classically involving bilateral vestibular nerves. Pediatric presentations are uncommon and often atypical. Early recognition is crucial, as timely multidisciplinary management may improve neurological and visual outcomes.

Case Presentation: We report a case of an 11-year-old boy presenting with acute horizontal binocular diplopia and right esotropia. The patient had history of right eye (OD) severe amblyopia due to high myopia and congenital retinal hamartoma. Ophthalmological examination revealed visual acuity of 20/400 OD and 20/20 on the left eye (OS), a large-angle right esotropia with severe abduction deficit, and a wedge-shaped cataract OS. Neurological evaluation showed facial hypoesthesia with preserved corneal reflex. Brain and orbital MRI demonstrated bilateral thickening and enhancement of cranial nerves V, VIII and XII, along with right VI nerve involvement, consistent with multiple cranial schwannomas. Neuro-axis MRI further identified small dorsal and lumbar schwannomas without spinal cord compression. Audiometry revealed mild hearing loss. NF2-SWN was confirmed by genetic testing and treatment with bevacizumab was initiated. Initial neurological improvement was observed, followed by recurrence of sixth cranial nerve palsy (CNP) at 8 months, correlating with tumor progression and responding to treatment adjustment. At 4-year follow-up, the patient remains clinically stable without significant adverse effects.

Discussion: This case illustrates how a sixth CNP was key to the diagnosis of NF2-SWN in a child, as well as the first clinical sign of disease progression.

Conclusions: This case highlights the heterogeneity of NF2-SWN in pediatric patients. Importantly, this condition should be considered in the differential diagnosis of multiple cranial neuropathies in children. Multidisciplinary management is essential to guide treatment strategies.

P C38 Cryopyrin-Associated Periodic Syndrome: Papilledema Response to Canakinumab

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Introduction: Cryopyrin-associated periodic syndrome (CAPS) is a rare autoinflammatory disorder caused by NLRP3 gene mutations, with multisystem involvement. Ocular manifestations, including optic nerve edema, may represent an important but underrecognized feature.

Case Presentation: We report a 13-year-old girl with a history of recurrent inflammatory episodes since early childhood, including arthritis and pericarditis, initially managed with prolonged corticosteroid therapy. In 2021, she presented with headaches and transient visual disturbances and was diagnosed with bilateral papilledema. Initial treatment with corticosteroids and Acetazolamide led to partial regression. Subsequently, she received Methotrexate (2022–2023). In December 2024, genetic testing confirmed CAPS (NLRP3 mutation), associated with elevated serum amyloid A levels. Ophthalmologic examination revealed preserved visual acuity, normal anterior segment, and bilateral Frisen grade 2/3 papilledema. OCT showed increased RNFL thickness with peripapillary ovoid structures, while B-scan ultrasound confirmed optic nerve head drusen. Following diagnosis, Canakinumab (ILARIS) therapy was initiated. At follow-up, a significant reduction in papilledema was observed, with stable visual function and overall clinical improvement.

Discussion: This case underscores the diagnostic challenge of optic nerve edema in the context of chronic inflammatory disease. The coexistence of optic disc drusen may obscure the clinical picture. Recognition of CAPS is essential, as targeted IL-1 inhibition can effectively control systemic inflammation and improve ocular findings.

Conclusions: CAPS should be considered in the differential diagnosis of unexplained papilledema. Early diagnosis and treatment with Canakinumab may lead to significant regression of optic nerve edema and improved long-term outcomes.

P C39 Genetic Profile of Patients with Leber Congenital Amaurosis in Bulgaria

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Leber Congenital Amaurosis (LCA) is a group of severe early-onset retinal dystrophies characterized by profound visual impairment and significant genetic heterogeneity. This study aims to delineate the molecular genetic landscape of a Bulgarian patient cohort to improve diagnostic precision and facilitate access to personalized clinical management and emerging therapies. A retrospective analysis was conducted on a cohort of 23 Bulgarian patients with a clinical diagnosis of LCA or related early-childhood onset retinal dystrophies, including Joubert syndrome with retinal involvement. Molecular diagnosis was achieved using a Targeted Next-Generation Sequencing (NGS) panel designed for inherited retinal dystrophies (IRD). Pathogenic variants were classified according to ACMG guidelines, and clinical parameters such as visual impairment, nystagmus, and refractive errors were correlated with the genetic findings. A definitive molecular diagnosis was established in 78% (18/23) of the screened cases, demonstrating high genetic heterogeneity. The most frequently identified genetic cause was mutations in RPE65 (n=5). Additionally, a prominent representation of genes associated with the ciliopathy spectrum was observed, specifically AHI1 (n=3), CEP290 (n=2), and CEP250 (n=2). Other identified pathogenic variants occurred in GUCY2D, LCA5, AIPL1, CRB1, RDH12, CPLANE1, and CC2D2A. A significant finding was the phenotypic overlap between isolated LCA and systemic conditions, particularly Joubert syndrome, in patients harbouring mutations in ciliary protein genes. In 22% (n=5) of cases, the targeted panel did not identify a clear pathogenic variant, suggesting the presence of rare or deep intronic mutations not covered by the current assay. The genetic profile of LCA in Bulgaria is characterized by a high prevalence of RPE65 and ciliopathy-related mutations. The diagnostic yield of the targeted IRD panel (78%) underscores its clinical utility in navigating the complex overlap between isolated and syndromic retinal dystrophies. Establishing this genetic mapping is essential for accurate prognosis, multidisciplinary care, and identifying candidates for gene-specific therapies.

P C40 Wolfram Syndrome and Wolfram-like Syndrome – Two Clinical Cases

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Introduction: Wolfram syndrome is rare, progressive neurodegenerative disorder characterized by the association of early-onset diabetes mellitus and optic atrophy, frequently accompanied by diabetes insipidus and sensorineural hearing loss. The syndrome is most commonly caused by pathogenic variants in the WFS1 gene, leading to dysfunction of the endoplasmic reticulum and increased cellular sensibility to stress-induced apoptosis. Due to the early manifestation of visual impairment, ophthalmologists often play a crucial role in establishing the diagnosis.

Case presentation: We present two clinical cases of male patients diagnosed with Wolfram syndrome, illustrating the variability in clinical presentation and diagnostic course of this rare neurodegenerative disorder. The first patient demonstrates a fully developed clinical phenotype, characterized by early-onset insulin-dependent diabetes mellitus, progressive optic atrophy leading to significant visual impairment, diabetes insipidus, and sensorineural hearing loss, consistent with the classical DIDMOAD spectrum. The second patient exhibited more insidious and incomplete clinical presentation- bilateral optic nerve atrophy, progressive visual deterioration and nocturnal enuresis. Despite long-term clinical follow-up over several years, the diagnosis remained unestablished due to the absence of a fully expressed phenotype. The definitive diagnosis was achieved only after genetic testing, which confirmed pathogenic variants consistent with Wolfram syndrome.

Discussion: These cases illustrate the variable clinical presentation and progressive multisystem involvement. Optic nerve and progressive loss of vision can be the leading clinical features that prompt consideration of Wolfram syndrome in the differential diagnosis. Recognition of the clinical features is essential for establishing an early diagnosis and enabling appropriate genetic testing, multidisciplinary follow-up, and long-term management.

Conclusion: Wolfram syndrome represents a complex multisystem disorder. Although current management remains largely supportive, early diagnosis enables careful monitoring for systemic complications and appropriate patient counselling. Increased clinical awareness is critical for improving diagnostic accuracy and contributing to a better understanding of the natural history of this rare disease.

P C41 Interdisciplinary Perspectives on Convergence Insufficiency in Paediatric Acquired Brain Injury

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Objective: To determine the prevalence of convergence insufficiency (CI) and other treatable visual deficits in children with acquired brain injury (ABI), including both traumatic (TBI) and non-traumatic aetiologies, within an interdisciplinary paediatric service.

Methods: An interdisciplinary team (paediatric neurology, neuropsychology, speech-language pathology, orthoptics, and ophthalmology) conducted routine ABI evaluations. Symptoms were screened using the Convergence Insufficiency Symptom Survey (CISS). Children with positive CISS scores were referred for comprehensive orthoptic and ophthalmologic assessment, including evaluation of ocular alignment, near point of convergence, fusional vergence, accommodation, and refraction. Neuropsychological testing was performed using WISC-V or WAIS-IV, and the processing speed index (PSI) was compared with full-scale IQ (FSIQ).

Results: Suspected CI was identified in 53% of participants, and among those assessed by an orthoptist, 43% fulfilled diagnostic criteria. CI was present in both traumatic (TBI) and non-traumatic brain injury (nTBI), suggesting that visual dysfunction spans multiple aetiologies. A substantial proportion of children also exhibited previously undetected refractive or accommodative errors, indicating unmet visual needs. Mean processing speed was slightly lower than normative data. Most children showed less than one standard deviation difference between FSIQ and PSI; however, notable individual variability was observed, with some demonstrating reduced processing speed relative to cognitive ability. No consistent differences in processing speed were found between children with and without CI.

Conclusions: CI is common in paediatric ABI regardless of aetiology but does not appear to systematically affect cognitive processing speed. Systematic identification of treatable visual dysfunctions is essential within interdisciplinary care.

Clinical Implications: Orthoptic screening for CI should be routine in children with ABI, followed by targeted assessment. Early correction of refractive errors is essential. Interpretation should consider functional symptoms such as reading difficulties and visual fatigue.

P C42 Clinical and Genetic Profile of Syndromic Forms of Retinitis Pigmentosa in Bulgarian Patients

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Objective of the Study: To characterize the clinical and genetic profile of syndromic forms of retinitis pigmentosa (RP) in Bulgarian patients, with emphasis on syndrome distribution and severity of visual impairment.

Materials and Methods: A retrospective analysis of 31 patients with syndromic RP was performed. Clinical evaluation included detailed ophthalmological examination and genetic testing. Patients were classified according to underlying syndrome: Usher syndrome (USH), Bardet–Biedl syndrome (BBS), neuropathy, ataxia, and retinitis pigmentosa (NARP), and Senior- Loken syndrome (SLS).

Results: USH was the most prevalent syndrome, identified in 24 patients (77.4%), followed by BBS in 5 patients (16.1%), while SLS and NARP were each diagnosed in one patient (3.2%). Variants in the USH2A gene were the most frequently detected. The mean age of patients was 38.6 ± 18.6 years (range: 6–78 years), with males comprising 58% of the cohort. A positive family history was reported in 29% of cases, with no reported consanguinity. Systemic symptoms most commonly began before 10 years of age (77%), whereas ocular symptoms were most frequently reported between 10 and 30 years (58%). The mean visual acuity was 1.06 logMAR. A statistically significant correlation was found between increasing age and severity of visual impairment ($p = 0.02$).

Discussion: The predominance of USH and its broad spectrum of severity reflect its clinical and genetic heterogeneity. BBS cases were fewer and generally exhibited moderate disease severity, possibly indicating slower progression or earlier diagnosis. The limited number of NARP and SLS cases is consistent with their rarity and restricts broader conclusions.

Conclusions: Syndromic RP in this cohort is dominated by Usher syndrome, with most patients presenting with moderate to severe visual impairment. These findings highlight the importance of comprehensive clinical and genetic evaluation for accurate diagnosis, prognosis, and patient management.

P C43 Oculomotor Palsy in an Infant as First Sign of an Ethmoido-Orbital Mass-Multidisciplinary Management

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Introduction: Oculomotor nerve (III) palsy in infancy is rare and often presumed to be congenital. However, identifying an underlying structural cause, including neoplastic pathology, is essential for an accurate diagnosis, prognosis, and management.

Case Presentation: We report the case of an infant with severe limitation of adduction of the left eye (LE) noted since birth. At 2 months of age, eye examination revealed marked limitation of adduction and elevation in the LE, absent Bell's phenomenon, and normal motility in the right eye (RE). Brain and orbital MRI performed at 6 months revealed a posterior ethmoidal lesion exerting a compressive effect on the orbital apex initially raising suspicion for an ethmoidal mucocele and associated left optic nerve hypoplasia. Cycloplegic refraction revealed hyperopia OS>OD. Full-time spectacle correction and occlusion therapy of the RE were initiated. At 9 months of age, the patient underwent endoscopic surgical excision of the lesion. Histopathology was consistent with a mesenchymal tumor, with differential diagnoses including infantile fibrosarcoma, fibrous meningioma, and juvenile psammomatoid ossifying fibroma. The patient subsequently completed 10 cycles of systemic chemotherapy. Follow-up PET-CT at 1 year of age showed no evidence of residual or recurrent disease. The ocular motility deficit remained stable, with the development of a compensatory right head turn.

Discussion: This case highlights the importance of early neuroimaging in infants presenting with presumed congenital oculomotor palsy. The ethmoido-orbital lesion supports a compressive mechanism at the orbital apex. Management required a multidisciplinary approach involving ophthalmology, ENT, and pediatric oncology, with surgical challenges related to the limited anatomical space and the child's small age. Optical correction and amblyopia therapy remain essential for optimizing visual development.

Conclusion: Oculomotor nerve palsy in infancy may represent the first manifestation of an underlying orbital tumor. Prompt imaging and multidisciplinary management are crucial for improving both visual and systemic outcomes.

P C44 Intermittent Third Nerve Dysfunction in Childhood: Challenges in a Benign Appearing Condition

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Introduction: Recurrent third nerve palsy in childhood is rare, particularly when episodes are brief, self-resolving, and associated with normal neuroimaging. Post-viral oculomotor neuritis has been proposed as a mechanism, but published reports remain limited. This case describes a child with multiple intermittent episodes of partial third nerve palsy without pupil involvement.

Case Presentation: A boy experienced three episodes of left-sided ptosis and diplopia at ages 3, 5, and 7, each lasting a few days and preceded by viral illness. Neuroimaging during earlier episodes was unremarkable. Between episodes, ocular examinations (including optic discs, maculae, and ocular motility) were normal, with no fatigability and a stable congenital anisocoria of 1 mm. At a later presentation, he developed diplopia in all gazes except down and out, with mild ptosis and no headache, visual loss, or pupillary abnormality. Symptoms again followed a viral illness and began to improve spontaneously. Dilated fundus examination remained normal, and there were no signs of raised intraocular pressure. A trial of topical anti-inflammatory treatment was initiated, and paediatric neurology follow-up was requested.

Discussion: The episodic nature, association with viral prodrome, and spontaneous recovery support a diagnosis of intermittent post-viral oculomotor neuritis. The absence of pupil involvement and consistently normal neuroimaging reduce the likelihood of compressive or structural causes. Although cyclic oculomotor paresis has been described, the duration and pattern in this case differ from typical presentations. The rarity of recurrent isolated third nerve palsy in children highlights the diagnostic challenge and the importance of excluding serious pathology while recognising benign, self-limiting patterns.

Conclusions: This case illustrates a rare pattern of recurrent, transient partial third nerve palsy in a child, likely secondary to post-viral neuritis. Normal examinations between episodes and unremarkable imaging support a benign course. Continued clinical vigilance and neurology involvement remain appropriate, given the limited literature and unusual recurrence pattern.

P C45 Gene Therapy Clinical Trials for Inherited Eye Diseases: The Pediatric Perspective

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Objective of the study: Gene therapy constitutes an emerging option for the treatment of inherited ocular diseases in younger populations, where their manifestation is predominantly seen. We conducted a narrative review aiming to provide an introspective analysis of several pioneering gene therapy approaches for pediatric ophthalmology that are currently under investigation.

Materials and Methods: Our search encompassed the ClinicalTrials.gov database. Clinical trials with published results reporting gene therapy for genetic ocular diseases in children (under 18 years) were included, excluding studies solely on adults or other species.

Results: Sixteen relevant studies were retrieved according to the inclusion criteria. Diseases studied included Leber’s Congenital Amaurosis (CEP290, RPE65 genes), Leber’s Hereditary Optic Neuropathy (ND4), Retinitis Pigmentosa (MERTK), Usher Syndrome Type 2 (USH2A), X-linked Retinitis Pigmentosa (RPGR), Achromatopsia (CNGA3, CNGB3), and X-linked Retinoschisis (RS1). The majority of the clinical trials in our search were in Phases 1 or 2, with five studies having progressed to Phase 3. In certain cases, treatment demonstrated encouraging results, providing the patients with improved BCVA, retinal sensitivity, and overall quality of life. However, outcome measures concerning the efficacy and tolerability of gene therapy varied and some studies recorded a plethora of adverse events. Clinical trials that are highly anticipated but have yet to publish their results were also recorded.

Discussion: While gene therapy offers promise for treating IRDs in pediatric populations, several critical challenges must be addressed to optimize its safety, efficacy, and accessibility. Potential future strategies should include stratified enrollment based on age, separate cohorts for pediatric and adult patients, or adaptive trial designs, to ensure that the age-related differences in disease progression, immune responses, and safety are appropriately addressed.

Conclusion: Gene therapy is drastically altering the landscape of pediatric ophthalmology, leading to constant evolution and representing a transformative potential for the young patients.

P C46 Tolosa–Hunt Syndrome in Childhood: A Rare Cause of Painful Ophthalmoplegia

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Introduction: Painful ophthalmoplegia in children is a rare neuro-ophthalmologic presentation that requires prompt investigation to exclude infectious, neoplastic, vascular, inflammatory, or demyelinating causes. Tolosa–Hunt syndrome is exceptionally uncommon in childhood and remains a diagnosis of exclusion.

Case Presentation: An 11-year-old girl presented with acute diplopia, left periocular pain, and progressive limitation of ocular motility. Examination demonstrated left ophthalmoplegia with upper gaze deficit and binocular diplopia. She also reported persistent headache and periocular discomfort requiring daily NSAIDs.

Magnetic resonance imaging (MRI) revealed inflammatory enhancement in the cavernous sinus/orbital apex region. Extensive investigations, including haematological, serological, infectious, autoimmune, and cerebrospinal fluid studies, excluded neoplastic, infectious, demyelinating, and systemic inflammatory diseases.

Based on the clinical and radiological findings and exclusion of alternative causes, a diagnosis suggestive of Tolosa–Hunt syndrome was considered. Systemic corticosteroid therapy led to rapid pain reduction and gradual recovery of ocular motility. Follow-up MRI demonstrated interval improvement of the inflammatory findings.

Discussion: Tolosa–Hunt syndrome is rarely encountered in children and may mimic other causes of painful ophthalmoplegia. Early neuroimaging and multidisciplinary evaluation are essential to exclude serious conditions. A prompt response to corticosteroids supports the diagnosis, although careful follow-up remains necessary.

Conclusion: Tolosa–Hunt syndrome should be considered in the differential diagnosis of painful ophthalmoplegia in children. Early recognition, exclusion of alternative diagnoses, and timely corticosteroid treatment may lead to favourable outcomes.

P C47 Novel Deep Intronic LRAT Variant in a 17-Year-Old patient with Retinal Dystrophy

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Introduction: LRAT (lecithin: retinol acyltransferase) autosomal recessive mutations cause early-onset retinal dystrophy, including retinitis pigmentosa and Leber congenital amaurosis, characterized by progressive vision loss, nyctalopia, visual field defects, and dyschromatopsia. LRAT is essential for retinoid metabolism and 11-cis-retinal recycling in the visual cycle.

Case Presentation: We report a 17-year-old compound heterozygote with a novel deep intronic LRAT variant which presented with nyctalopia, visual field amputation, and dyschromatopsia. Whole-genome sequencing identified compound heterozygous LRAT variants: c.459dup (p.Tyr154LeufsTer30) and a novel deep intronic variant c.541-753T>G (p.?), inherited from both parents. Comprehensive ophthalmological examination including electrophysiology confirmed LRAT-associated retinal dystrophy with characteristic retinal appearance. At diagnosis, best-corrected visual acuity (BCVA) was 1.0 in both eyes. Following treatment with oral retinoid therapy, nyctalopia and dyschromatopsia significantly decreased, while BCVA remained stable at 1.0 bilaterally.

Discussion: This case expands the LRAT mutation spectrum by reporting the first deep intronic variant c.541-753T>G, demonstrating that non-coding variants can cause LRAT-related retinal dystrophy. The favourable treatment response to oral retinoid therapy aligns with previous studies showing functional improvements in LRAT-deficient patients, with restoration of retinoid metabolism bypassing the enzymatic defect. Preserved visual acuity despite symptomatic presentation suggests early intervention potential.

Conclusions: This case highlights the importance of whole-genome sequencing in identifying novel deep intronic LRAT variants and demonstrates the therapeutic efficacy of oral retinoid therapy in LRAT-associated retinal dystrophy, with significant symptomatic improvement and preserved visual acuity.

P C48 Ophthalmological Initial Manifestations in Pediatric Onset Multiple Sclerosis, 2 Case Report

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Pediatric Onset Multiple Sclerosis (POMS) is a rare form of the disease and effects approximately 3-5% of individuals with MS. In POMS the first attack is typically monofocal and may involve either the sensory or the motor visual system. Most children completely recover form their first clinical attack. The poster reports 2 cases of POMS with initial symptoms of Optic Neuritis and Internuclear Ophthalmoplegia in a 14 and 10 years old female patients. The ophthalmological findings may lead to an early diagnosis and treatment of POMS with possible better long time prognosis.

P C49 Transient Horner Syndrome, Case Report

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Horner syndrome is described as a triad of ptosis, miosis, and anhidrosis resulting from disruption along the oculosympathetic pathway. Postganglionic Horner's syndrome, which results from cervical sympathetic chain damage after thyroid surgical procedures, is a rare thyroidectomy complication. The condition may resolve spontaneously within a few months. This is s report of a 10 year old male patient who developed Horner syndrome after total thyroidectomy and lateral neck dissection with cervical lymphadenectomy for thyroid cancer. Awareness of the anatomy of the region and the possible damage of the postganglionic fibers in extended cervical surgery may ease the diagnosis and explain the signs and symptoms.

P C50 Bartonella Henselae Neuroretinitis, Case Report

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Cat scratch disease is an infectious disease caused by Bartonella henselae. In immunocompetent patient the disease is self-limited and ocular involvement is very rare. We report a case of a 9 years old female patient, with no underlying illness, who presented for acute decrease in visual acuity in one eye due to neuroretinitis. The child was promptly evaluated by the infectious disease specialist and treatment with azithromycin was started with very good recovery. Serological immunoassays confirmed the ethiopathogenic agent.

P C51 Idiopathic Unilateral Oculomotor Nerve Palsy in an Adolescent Female

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A 17-year-old girl presented with acute-onset diplopia, right eyelid ptosis, and exotropia. Examination revealed partial right oculomotor nerve (III) palsy with a dilated, non-reactive pupil, and suspected right trochlear (IV) involvement; no other neurological deficits were found. Brain MRI and CT-angiography showed no tumor, aneurysm, or infarction (aside from asymptomatic vascular variants and mild signs of raised intracranial pressure). Extensive laboratory workup was unrevealing except for a mildly positive ANA. Rheumatology and endocrinology evaluations considered lupus, vasculitis, and myasthenia gravis, but no definitive diagnosis was made. A presumptive diagnosis of idiopathic cranial neuropathy was reached after excluding compressive, vascular, infectious, and classic autoimmune causes. Treatment with high-dose corticosteroids and supportive therapy was initiated. By two weeks the patient had marked improvement, and by three weeks diplopia and ptosis had largely resolved. This case highlights the diagnostic challenge of isolated oculomotor palsy in a teenager and underscores the need for a systematic evaluation. Steroid therapy was employed empirically, with favourable response. Idiopathic isolated third nerve palsy is rare in adolescents and remains a diagnosis of exclusion.

P C52 CEP290-Associated Leber Congenital Amaurosis Type 10 in Pediatric Patient: A Case Report

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Introduction: Leber congenital amaurosis is a severe retinal dystrophy, causing blindness or severe visual impairment at birth or during the first months of life. There are currently no effective treatments for inherited retinal diseases like CEP290-associated LCA10. The inclusion of patients with LCA in clinical trials aims to slow the progression of the disease and improve visual function.

Case presentation: The patient is a 7-year-old boy, born prematurely. He presented horizontal nystagmus, esotropia, pupils minimally reactive to light, hyperopia (SE +6.50 for RE and +6.00 for LE, without cycloplegia) and achromatopsia. Correction of refractive errors was prescribed at 18 months. BCVA remained significantly impaired (0.25 decimal/0.6 logMAR OU). Tonometry and slit lamp exam are normal. Fundoscopy showed normal optic disc and subtle pigmentary changes. The OCT macular scans show the presence of the photoreceptor layers, detectable ONL and EZ and a perifoveal hyperfluorescent ring in autofluorescence. ERG and VEP responses were recorded. Next generation sequencing using a panel of 558 genes associated with hereditary diseases of the retina showed a homozygous pathogenic, class 5 mutation, c.2991+1655A>G in CEP290. There is no syndromic involvement, no retinal dystrophy in the family history and no consanguinity. Patient was screened for Hyperion study.

Discussion: There are modern techniques that support diagnosis (OCT, ERG), but genetic testing is necessary to identify pathogenic variants. Multidisciplinary management is important for diagnosis, access to gene therapies, medical innovation, in maintaining an active lifestyle and in social integration.

Conclusions: LCA cause severe vision loss starting in early childhood. Sepofarsen is an RNA antisense oligonucleotide designed for treating LCA10. The potential therapeutic role of sepofarsene in LCA10 warrants further clinical investigation.

Keywords: Leber congenital amaurosis, CEP290, sepofarsen, multidisciplinary management

P C53 Ganglion Cell Layer Stratification Artifact in Pediatric IIH Predicts Permanent Optic Nerve Damage

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Background: Idiopathic intracranial hypertension (IIH) is a rare pediatric disease with distinct characteristics. Optical coherence tomography (OCT) offers measurements of retinal nerve fiber layer (RNFL) and ganglion cell layer (GCL), that can indicate disease severity.

Methods: A retrospective study comparing outcome in IIH children with papilledema associated with artifactual GCL stratification to those without this abnormality.

Results: 34 children (23 girls, mean age 11.6 ± 3.8 years). All having normal neuroimaging and mean lumbar puncture opening pressure of 41.3 ± 11.2 cmH_2O. Fifteen (44%) had abnormal stratification of initial GCL scans (mean 48.1 ± 16.1 µm) that was associated with more severe papilledema (mean RNFL 381.8 ± 132.7 µm). Nineteen children (56%) without this abnormality had a mean baseline GCL of 85.8 ± 6.0 µm and mean RNFL 170.1 ± 85.5 µm (both $p < 0.001$). Children having the GCL scan abnormality had a greater degree of permanet axonal damage reflected by a final thinner mean RNFL thickness (95.5 ± 27.9 µm vs 110.0 ± 23.2 µm, $p = 0.011$). A multivariate analysis revealed that RNFL thickness ≥300 µm was a significant predictor of abnormal GCL stratification at presentation ($\beta = 0.73$, $p < 0.001$).

Conclusions: GCL segmentation abnormalities are prevalent in OCT scans of IIH children, particularly when papilledema is pronounced and RNFL thickness exceeds 300 µm. This abnormality emerges as a predictor of more severe optic nerve damage. Further research is needed to ascertain whether children exhibiting this segmentation abnormality necessitate distinct treatment modalities to enhance their prognosis.

P C54 RETINOBLASTOMA IN LATVIA: A 25-YEAR CLINICAL AND GENETIC ANALYSIS

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Objective of the study: To evaluate clinical, genetic, and treatment-related factors in retinoblastoma patients and analyze their association with disease progression, tumor characteristics, and therapeutic decision-making.

Materials and methods: A retrospective single-center study was conducted including 17 patients diagnosed with retinoblastoma between 2000 and 2025. Clinical data, tumor characteristics, genetic status (RB1), and treatment modalities were analysed. Statistical analysis was performed using Fisher-Freeman-Halton exact test, Fisher's exact test, Mann–Whitney U test, and Kruskal–Wallis test.

Results: Leukocoria was the most common presenting sign. RB1 mutations were identified in 9 patients, with diverse genetic variants observed, although 2 patients have the same c1333C>T, (p.(Arg445*)) mutation. Two patients with RB1 mutation was conceived by IVF. Family history of retinoblastoma was present in several cases. A statistically significant association was found between RB1 mutation and disease laterality (p=0.021), with bilateral disease more frequent in RB1-positive patients. RB1-positive patients were diagnosed significantly earlier (p=0.019). Tumor "seeds" were significantly associated with advanced disease stages (p=0.0034), occurring exclusively in stages D and E. Tumor size showed a tendency to increase with stage and in the presence of seeds, although without statistical significance. Enucleation was significantly associated with the inability to assess the macula and optic nerve (p=0.001).

Discussion: The findings highlight the importance of genetic factors in disease presentation and confirm "seeds" as a marker of advanced retinoblastoma. The lack of statistical significance in several analyses likely reflects the small sample size, though clinically relevant trends were observed.

Conclusion: RB1 mutation is associated with earlier diagnosis and bilateral disease, while tumor seeds indicate advanced stages. These findings highlight the importance of genetic testing and early surveillance strategies to improve clinical outcomes.

GROUP D: Miscellaneous (Day 2, 15:40 - 16:10)

Moderators: M. Dragomir (Romania), P. Domsa (Hungary)

P D55 Anticancer Drugs: Hidden Retinal Threats in Pediatric Oncology

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Introduction: Childhood cancers, although rare, represent the fourth leading cause of death before age 15 in France. Survival now exceeds 80% thanks to chemotherapy, but the retina is a known target of these anticancer agents.

Case presentation: Two children were referred for severe bilateral visual acuity loss following chemotherapy. Case 1: an 11-year-old boy treated for bone marrow hypoplasia with Busulfan, Thiotepa, and Fludarabine prior to hematopoietic stem cell allograft developed progressive bilateral visual loss 30 days post-transplant, with visual acuity below 1/10, bilateral central scotomas, and photophobia. Fundus examination revealed bilateral central macular atrophy; OCT showed major alteration of the foveal photoreceptor line; ERG demonstrated blunting of the photopic A-wave. Lesions were irreversible. Case 2: a 6-year-old girl treated for stage IV pineoblastoma with Etoposide and Carboplatin (PNET-HR protocol) presented after her second cycle with bilateral visual acuity reduced to counting fingers, tubular visual field, bilateral papilledema, protan color vision defect, and macular photoreceptor alterations on OCT. Bilateral optic atrophy developed during follow-up.

Discussion: Fludarabine, a purine analog, is implicated in the destruction of retinal bipolar and ganglion cells approximately one month after administration, as previously reported in three adults following hematopoietic stem cell allograft. Carboplatin is known to cause maculopathies through alterations of the retinal pigment epithelium, with variably reversible damage. Etoposide may also contribute to retinal toxicity, particularly in patients with renal impairment.

Conclusions: These severe ophthalmologic reactions to Fludarabine and Carboplatin underscore the need for a baseline pre-therapeutic ophthalmologic assessment and close monitoring of pediatric patients undergoing chemotherapy, who often underreport visual symptoms. Early detection allows timely low-vision rehabilitation.

P D56 D.I.M.S. Lenses versus Overnight Ortho-K: 3 Year Outcomes – Which Slows More?

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Objective of the study: Changes in axial eye length (AL) was compared using D.I.M.S. lenses (Miyosmart) and orthokeratology lenses (Ortho-K) in slowing the progression of myopia in school-aged children.

Methods: A total of 30 children aged 8 to 16 years were included in the study: the D.I.M.S. group (17 children, median age 11) and the orthokeratology group (13 children, median age 12). AL was measured every 6 months using a Movu Argos SS-OCT device. The study covers a 36-month follow-up period. Results are presented as mean±SEM, statistical analysis was performed using Student's t-test and Pearson correlation with $p<0.05$ considered statistically significant.

Results: Baseline spherical equivalent (SE) and AL showed no significant differences: –3.19±3.2 D and 24.81±2.1 mm (D.I.M.S) versus –3.42±3.0 D and 24.70±1.3 mm (orthokeratology). After 24 months of follow-up, no significant difference was found in axial length change between the groups (D.I.M.S.: 0.15±0.3 mm; orthokeratology: 0.21±0.5 mm; $p=0.261$). Age did not correlate with the magnitude of the treatment effect in either group. However, baseline SE showed a significant correlation in the orthokeratology group: higher baseline SE was associated with a more pronounced slowing of AL elongation, whereas lower SE was associated with a reduced effect (at 24 months: $r=0.756$, $p<0.001$). The effectiveness of D.I.M.S. lenses did not correlate with baseline SE (at 24 months: $r=–0.045$, $p=0.805$). Data collection for the 36-month follow-up is still ongoing at the time of abstract submission.

Conclusions: The mean AL change over the 24-month follow-up period was comparable between the study groups, indicating that both treatment options are similarly effective for slowing the progression of childhood myopia. Our results suggest that orthokeratology was more effective in cases with higher baseline SE, whereas the myopia control effect of D.I.M.S. lenses was not influenced by baseline SE.

P D57 Accommodative Abnormalities and Pseudomyopia in Children with War Stress and Myopia Progression

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Objective: War-related environmental changes have altered children's routines, increasing digital exposure and reducing outdoor activity, potentially affecting accommodative function and myopia progression. The aim of this study was to evaluate accommodative disorders, pseudomyopia, and their association with myopia progression in school-aged children.

Methods: A cross-sectional study included 1,000 children from Kyiv (n=600) and Konotop (n=400), stratified into three age groups (6-9, 10-13, 14-17 years). Cycloplegic refraction and accommodative function (amplitude, lag, relative accommodation) were assessed. Pseudomyopia was defined as ≥−0.50 D before cycloplegia and <−0.50 D after cycloplegia. Accommodative disorders were defined as abnormalities in accommodative amplitude, lag, or relative accommodation.

Results: Accommodative disorders were present in 52% of children, highest in the 6-9-year group (60%, 46%, and 34%; $p<0.001$), which also showed the fastest myopia progression (−0.52, −0.36, and −0.21 D/year in the 6-9, 10-13, and 14-17-year groups, respectively; $p<0.001$). Pseudomyopia was identified in 24% of participants and was more frequent in younger children (30%, 22%, and 14%; $p<0.001$). It was associated with increased accommodative lag and reduced accommodative reserves compared to those without pseudomyopia ($p=0.01$). Children without optical correction showed faster progression (−0.75 ± 0.25 D/year; $p<0.001$), while orthokeratology and myopia control lenses were associated with significantly slower progression (−0.28 ± 0.15 and −0.33 ± 0.18 D/year; $p<0.01$).

Conclusions: War-related environmental and behavioral changes were associated with a high prevalence of accommodative disorders and pseudomyopia in school-aged children, particularly in younger age groups, and were linked to accelerated myopia progression. Cycloplegic refraction is critical for accurate differentiation between pseudomyopia and true myopia, helping to avoid refractive overestimation, while myopia control interventions demonstrated a significant protective effect by slowing progression compared to no optical correction.

P D58 Endoscopic-Assisted Probing and Stenting for Complex Congenital Nasolacrimal Duct Obstruction

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Abstract Introduction: Surgical treatment of complex nasolacrimal duct obstruction using endoscopic-assisted nasolacrimal probing with stent placement demonstrates promising preliminary results in restoring tear drainage. This minimally invasive approach combines precise probing under endoscopic visualization with silicone stent intubation to address multilevel obstructions, particularly in cases resistant to standard probing.

Methods: In a prospective case series, 25 patients (aged 25-84 months) with complex nasolacrimal duct obstruction underwent endoscopic-assisted probing. The procedure involved nasal endoscopy for anatomical orientation and treatment of the underlying cause, followed by probing of the superior and/or inferior canaliculi and stent placement for 3 months. Success was defined as symptom resolution (epiphora) and normalization of the fluorescein dye disappearance test at 1 month post-stent removal. Preliminary

Results: At 3-month follow-up, the primary success rate reached 92% (23/25 patients), with complete resolution of tearing and a patent nasolacrimal system. Two cases required revision due to tube displacement. No intraoperative complications occurred; postoperative findings included mild epistaxis (12%) and tube displacement (8%). Endoscopic guidance improved success over traditional probing (92% vs. 70% literature benchmarks) by enabling targeted membrane perforation, cyst removal, enlargement of the Hasner valve, and synechiae management.

Conclusions: Endoscopic-assisted probing with stenting offers high efficacy for complex obstructions, reducing revision rates through enhanced visualization. Longer-term data will assess stent duration optimization and recurrence patterns. This technique warrants broader adoption in challenging nasolacrimal pathologies.

P D59 Visual Acuity Precedes Stereoacuity Recovery in Amblyopic Patients Using Home-Based Digital Therapeutics

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Purpose: While visual acuity (VA) is the traditional primary outcome measure in amblyopia treatment, real-world functional impairment is closely linked to stereoacuity deficits. This study utilized longitudinal data from a home-based digital dichoptic therapy platform to determine whether monocular VA or binocular stereoacuity crosses a clinically meaningful improvement threshold first during treatment.

Methods: A retrospective, observational analysis was conducted using data from 415 eligible patients utilizing a combined home-based digital dichoptic platform (Eye Hero / AmblyoPlay). Inclusion criteria required a baseline VA worse than 20/30 (logMAR ≥ 0.18) in at least one eye, baseline stereoacuity worse than 40 arcsec, and a minimum of 12 weeks of non-missing recorded test data. Meaningful clinical improvement thresholds were defined as a 0.1 logMAR change for VA and a conservative 2-octave reduction for stereoacuity.

Results: Among the 188 patients where a clear sequence of improvement was identified, VA improved first in 66.0% of cases compared to 34.0% for stereoacuity ($p = 0.000014$). Paired timing analysis (n=224) demonstrated a median time to initial improvement of 2 weeks for VA versus 4 weeks for stereoacuity ($p = 0.000001$). The VA-first pattern was heavily concentrated in patients with severe baseline amblyopia (logMAR ≥ 0.6), who improved first in VA 70.5% of the time ($p < 0.0001$). In contrast, patients with mild-to-moderate amblyopia showed no significant ordering. Notably, among the 210 patients with no measurable stereopsis at baseline (200 arcsec ceiling), 74.3% successfully reached a full 2-octave improvement (≤50 arcsec) during treatment. Weekly training compliance showed no statistically significant relationship with achieving improvement outcomes.

Conclusion: In patients undergoing home-based digital dichoptic therapy, clinically meaningful gains in visual acuity typically precede improvements in stereoacuity, especially in cases of severe amblyopia. Clinicians should anticipate that binocular depth perception recovery may lag behind monocular VA gains by several weeks, and even patients starting with no measurable stereopsis can achieve substantial binocular improvements during treatment.

P D60 When the Ordinary Becomes Misleading

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Introduction: Decreased visual acuity in the absence of visible fundus abnormalities represents a diagnostic challenge in pediatric ophthalmology and may delay recognition of serious neuro-ophthalmic conditions. This case highlights the importance of multidisciplinary evaluation in children with unexplained visual loss.

Case Presentation: We report the case of a 12-year-old patient with a two-year history of optically corrected myopia and previously documented best-corrected visual acuity (BCVA) of 1.0 in both eyes. The patient presented with progressive visual decline in the right eye, without pain or associated symptoms. Ophthalmological examination revealed BCVA of 0.4 in the right eye and 1.0 in the left eye. Cycloplegic refraction showed comparable refractive values bilaterally. Functional assessment demonstrated preserved binocular and color vision, normal Worth test and Amsler grid findings, and reduced stereopsis (Lang I: 1200″). Anterior and posterior segment examinations were unremarkable.

Discussion: In the absence of detectable ocular pathology, a functional etiology was initially considered. Optical coherence tomography (OCT) of the macula and optic nerve showed no structural abnormalities. However, persistent unilateral visual impairment unexplained by clinical findings prompted further neuroimaging. Magnetic resonance imaging (MRI) revealed an expansive lesion involving the optic nerve, consistent with optic nerve astrocytoma. This case demonstrates the limitations of relying solely on normal fundus appearance and emphasizes the need for diagnostic vigilance in children with unexplained visual deficits.

Conclusion: Normal ophthalmological findings do not exclude significant pathology of the visual pathways. Early neuroimaging, particularly MRI, is essential for identifying retrobulbar lesions and preventing diagnostic delay.

P D61 Blepharophimosis Syndrome: A Case Report with Functional and Cosmetic Considerations

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Objectives: To describe the management and clinical evolution of a child diagnosed with blepharophimosis syndrome associated with severe ptosis and to highlight the functional and cosmetic challenges related to surgical treatment.

Case presentation: A 5-year-old Caucasian girl presented with severe bilateral ptosis causing visual obstruction and compensatory chin-up head posture. Ophthalmologic examination revealed poor levator muscle function of less than 4 mm, blepharophimosis, telecanthus, and epicanthus inversus. The patient had no history of prior surgical intervention, while the family history was positive for similar eyelid abnormalities, suggesting a hereditary condition. Based on the clinical findings, a diagnosis of blepharophimosis syndrome was established. Given the severity of the ptosis and the associated amblyopia risk, a staged surgical approach was chosen. Bilateral frontalis suspension using Gore-Tex was performed as the initial procedure in order to improve eyelid elevation. Postoperative outcome was favorable, with improved eyelid position and head posture. Subsequently, bilateral epicanthoplasty was carried out sequentially, one eye at a time, to address the cosmetic component of the syndrome and improve the palpebral fissure appearance.

Conclusions: Blepharophimosis syndrome is a rare genetic disorder affecting eyelid development. Early recognition and timely surgical intervention are essential in preventing amblyopia and achieving satisfactory functional and cosmetic outcomes. A staged surgical approach may provide good long-term results in pediatric patients.

P D62 Bilateral Severe Visual Loss in an 11-yo Girl with Normal Ocular Imaging: A Diagnostic Challenge

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Background: Severe bilateral visual loss in children with normal ocular examination and optical coherence tomography (OCT) represents a significant diagnostic challenge. Differentiating organic from non-organic etiologies is essential to avoid unnecessary interventions and to ensure appropriate multidisciplinary management.

Case Presentation: An 11-year-old previously healthy girl presented with progressive bilateral visual loss over two months. Best-corrected visual acuity deteriorated to counting fingers in both eyes. She denied ocular pain, headache, or systemic symptoms. Color vision was preserved, and no relative afferent pupillary defect (RAPD) was detected. Anterior segment and dilated fundus examinations were unremarkable bilaterally. Macular and retinal nerve fiber layer OCT findings were within normal limits. Despite profound subjective visual impairment, the absence of structural retinal or optic nerve abnormalities raised concern for retrobulbar, neurologic, hereditary, or functional causes of vision loss. Differential diagnoses included pediatric optic neuropathy, hereditary optic neuropathies such as Leber Hereditary Optic Neuropathy, cortical visual impairment, and Functional Visual Loss. Further investigations including neuroimaging, electrophysiologic testing, and **neurologic assessment were recommended.**

Conclusion: Profound bilateral visual loss with normal fundus examination and OCT in children requires a systematic multidisciplinary approach. Functional visual loss should be considered after exclusion of organic pathology, particularly when clinical findings are inconsistent with the degree of visual impairment. Early recognition may reduce unnecessary investigations and facilitate appropriate management and psychological support.

P D63 MNREAD-Based Reading Performance and Visual Perception in Refractive Esotropia

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Purpose: To evaluate the relationship between reading performance (RP), assessed using the Minnesota Low-Vision Reading Acuity Chart (MNREAD), and visual perception skills (VPS), assessed using the Test of Visual Perception Skills (TVPS), in children with refractive esotropia (RE).

Materials-methods: In this cross-sectional study, RP was evaluated using the MNREAD iPad application under high-brightness normal polarity (Test1), reverse polarity (Test2), and low-brightness normal polarity (Test3) conditions. Reading acuity (RA), critical print size (CPS), reading accessibility index (ACC), and maximum reading speed (MRS; words/minute [wpm]) were recorded. TVPS was used to assess basic, sequential, and complex VPS. Spearman correlation analysis was performed between ophthalmologic findings, MNREAD, and TVPS parameters.

Results: Fifteen children with RE were included (mean age: 10.46±1.76 years). No significant differences were found among test conditions for MRS, ACC, or CPS, whereas RA differed significantly between tests (Friedman; p=0.692, p=0.343, p=0.444, p=0.004, respectively). Post hoc analysis showed significant differences in RA between Test1 and Test2 and between Test1 and Test3 (p=0.011, p=0.006, respectively).Mean TVPS percentile scores for total, basic, sequential, and complex domains were 51.14±23.10, 46.21±24.18, 43.85±32.27, 61.78±22.23, respectively, with no significant differences among domains (p=0.115).Near deviation showed significant negative correlations with MRS1 and MRS3/ACC (ρ=-0.586, p=0.022; ρ=-0.601, p=0.018).Significant positive correlations were observed between CPS1 and TVPS total, basic, and complex scores, and between RA2 and TVPS total score (ρ=0.592, p=0.033; ρ=0.667, p=0.013; ρ=0.560, p=0.047; ρ=0.615, p=0.025).

Discussion: In children with RE, RA was affected by test conditions, with the best RP observed under high-luminance normal-polarity conditions. Increased near deviation was associated with reduced RP. TVPS percentile scores were generally within age norms, although sequential scores tended to be lower and complex scores relatively higher. Significant associations between VPS and MNREAD parameters suggest that RP in children with RE may be influenced not only by visual acuity but also by visual perceptual processes.

P D65 Does Myopia Prevalence in Acute Acquired Comitant Esotropia Exceed Age-Specific Population Rates?

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Purpose: Acute Acquired Comitant Esotropia (AACE) is increasingly reported in young patients in association with myopia, yet no pooled prevalence estimate exists, nor has it been compared with general-population age-specific rates. We aimed to quantify it, characterise its age dependence, and assess AACE-specific versus population baseline.

Methods: Systematic review and meta-analysis (PRISMA 2020). PubMed/MEDLINE was searched. Two reviewers independently screened and extracted records. Eligible studies were observational reports (n ≥ 10) reporting myopia prevalence (spherical equivalent ≤ −0.50 D) in AACE; case reports, neurological AACE, and heavy-eye syndrome were excluded. Pooled prevalence was estimated with a random-effects model. Pre-specified analyses included a paediatric (≤18 yr) versus adult (>18 yr) subgroup, meta-regression on mean cohort age, and comparison with age-specific population reference rates from East Asian and European studies. Robustness was assessed by leave-one-out and a sensitivity analysis restricted to studies with cycloplegic refraction.

Results: Thirty-three studies (n = 1,852; 1,206 myopic) were eligible. Pooled prevalence was 72.7% (95% CI 59.6–84.2; I^2 = 96.9%). Adult cohorts (k = 20) showed markedly higher prevalence than paediatric ones (k = 13): 87.5% (75.5–96.2) versus 43.8% (24.2–64.3), $p < 0.001$. Meta-regression confirmed a strong positive age effect (β = 0.054/year, $p < 0.001$*). Sensitivity analyses produced consistent estimates (leave-one-out 71.2–75.5%; cycloplegic-only 68.7%). The AACE prevalence-by-age curve broadly tracked background East Asian urban rates without exceeding them in the adolescent/young-adult range.

Conclusion: Myopia is highly prevalent in AACE with a strong age gradient explained almost entirely by mean cohort age. The AACE prevalence-by-age curve broadly mirrors background population rates, suggesting that the observed prevalence largely reflects the general myopia epidemic rather than a specific AACE-myopia association. Case-control studies with matched non-strabismic controls are needed.

P D66 Unilateral Coronal Synostosis with Complex Strabismus: A Case Report

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Introduction and Aim: Nonsyndromic unicoronal synostosis (UCS) is the third most common type of nonsyndromic craniosynostosis and may lead to various ocular abnormalities. We aimed to present a case of UCS and describe the ophthalmologic, clinical findings in a patient who underwent strabismus surgery.

Case Presentation: A 15-year-old boy presented with facial asymmetry, progressive left esotropia, and low vision in the left eye for 5 years. He had been diagnosed with left UCS since birth and had been followed conservatively because no neurological impairment was present. Examination demonstrated left frontal flattening, contralateral frontal bossing, left orbital rim elevation, leftward nasal deviation, and right-sided displacement of the lower face. Best-corrected visual acuity was 20/20 in the right eye and 20/400 in the left eye. Ocular examination revealed 40 prism diopters (PD) of left esotropia and 30 PD of left hypertropia, mild limitation of left abduction, bilateral mild superior oblique underaction, and left inferior oblique overaction. Fundus examination showed bilateral extorsion, more prominent in the left eye. Brain magnetic resonance imaging revealed anterior plagiocephaly and compensatory right hemimegalencephaly associated with left UCS, while orbital imaging demonstrated mild left orbital extorsion without significant asymmetry. A staged surgery was planned, and left medial rectus recession combined with superior rectus recession was performed as the first stage. Although residual 20 PD esotropia and 10 PD hypertropia remained at the postoperative 3rd month, the patient and his family were satisfied with the outcome.

Discussion and Conclusion: The prevalence of ocular anomalies in patients with UCS are higher than in other nonsyndromic craniosynostosis. Common ophthalmic manifestations include astigmatism, anisometropia, amblyopia, and strabismus, and patients may present with complex strabismus patterns. This case demonstrates that a single surgery can provide satisfactory ocular alignment. Nevertheless, careful follow-up remains essential because residual or progressive ocular deviations may occur.

P D67 Accommodation–Convergence–Pupil System in Accommodative Esotropia

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Objective: To evaluate visual function and accommodation–convergence–pupillary system (ACPS) parameters in different types of accommodative esotropia (AE).

Materials and Methods: A cross-sectional study included 93 children (6–18 years) with AE: refractive (n=48), non-refractive (n=33), and combined (n=12). Examination included BCVA, cycloplegic refraction, strabismus assessment, convergence, binocular vision (Worth 4-dot), and pupillography. Parameters analysed: pupil area and latency of direct, consensual, and near responses. Comparisons between AE types and normative data were performed (ANOVA, $p<0.05$).

Results: Mean hyperopia was highest in refractive AE (5.3±0.4 D) vs combined (4.1±0.6 D) and non-refractive AE (2.5±0.4 D), $p<0.01$. Reduced BCVA (<0.3) occurred in 55.8% (refractive), 42.0% (combined), and 33.3% (non-refractive AE). Fusion absence: 65.1%, 100%, and 51.9%, respectively. Monocular vision (Worth test): 88.4%, 85.1%, and 66.7%. Convergence weakness was observed only in combined AE (42.8%). Pupil diameter was significantly reduced in both eyes compared to controls ($p<0.05$). Latency of light reflex increased >3-fold across all AE types ($p<0.001$). Near reflex latency was also prolonged ($p<0.001$). Pupil area during ACPS relaxation was ~2× smaller than normal, while under activation no significant difference was observed ($p=0.12$).

Discussion: AE is associated not only with refractive and motor abnormalities but also with measurable dysfunction of ACPS. Combined AE demonstrates the most pronounced binocular impairment. Prolonged pupillary response latency suggests reduced neural adaptability, possibly involving brainstem regulatory mechanisms.

Conclusions: All forms of AE show significant ACPS dysfunction, including reduced pupil size and delayed reflexes ($p<0.001$). Pupillography may provide an additional objective marker of binocular system impairment in AE.

P D68 High Prevalence of Undetected Visual Impairment in Schoolchildren in Uzbekistan

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Childhood visual impairment remains largely preventable, yet screening programs are inconsistently implemented in many regions. We aimed to assess the burden and causes of reduced visual acuity among schoolchildren in Tashkent, Uzbekistan, to inform screening strategies.

A cross-sectional school-based study was conducted in February 2026, including 180 students aged 7–15 years selected by systematic random sampling. Distance visual acuity was assessed using a Snellen chart at 6 meters. Children with visual acuity ≤6/12 underwent further ophthalmic evaluation, including refraction and anterior segment examination.

Visual impairment (≤6/12 in either eye) was identified in 30.6% of students, with 11.1% having visual acuity <6/18 in at least one eye and 2.8% in the better eye. The majority of cases were attributable to uncorrected refractive error. Amblyopia was strongly associated with visual impairment. The observed prevalence is markedly higher than reports from comparable regions, suggesting a substantial burden of undiagnosed and untreated visual disorders.

These findings highlight a critical gap in pediatric eye care in Uzbekistan. The high proportion of correctable causes emphasizes the need for systematic school-based vision screening programs. Early detection and intervention are essential to prevent long-term visual and developmental consequences.

P D69 Use of Luxidropin in Infants with Nasolacrimal Duct Obstruction Before and After Probing

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Introduction: Nasolacrimal duct obstruction is a common condition in infants, sometimes requiring surgical intervention. The aim of this study was to evaluate the effect of Luxidropin — containing natural ingredients such as eyebright, echinacea, zinc, and vitamin E — on the local condition of the ocular surface in infants before and after lacrimal duct probing.

Material and Methods: The study included 35 infants aged 4 to 12 months diagnosed with nasolacrimal duct obstruction. All patients received conservative treatment: hygiene of the conjunctival sac, lacrimal duct massage, and Luxidropin application. Improvement was observed in 19 children, with no need for further intervention. The remaining 16 underwent probing, with continued use of Luxidropin. Parents were instructed on proper eye care and massage techniques.

Results: In all patients, improvement in the local condition was observed — no signs of irritation, inflammation, or secondary skin infections were noted. The skin around the eyes remained intact. The preparation was well tolerated, and no adverse effects were reported.

Conclusions: Luxidropin proved to be an effective and safe adjunct in the treatment of nasolacrimal duct obstruction in infants, both in conservative management and after surgical probing. It may serve as a valuable component of prophylaxis and perioperative care.

P D70 Physicians' Readiness to Treat Children with Autism Spectrum Disorders

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Purpose: Children with Autism Spectrum Disorder (ASD) present unique clinical challenges requiring specialized knowledge and adaptability from physicians. This study evaluated differences in ASD-related knowledge, perceived barriers, and readiness to treat between orthopedic surgeons and ophthalmologists. Identifying specialty-specific gaps may guide targeted educational strategies and improve equitable, patient-centered care for children with ASD.

Setting/Venue: The study was conducted in Israel among practicing orthopedic surgeons and ophthalmologists working in hospitals and outpatient clinics. Participants completed an online standardized questionnaire reflecting real-world clinical experiences across diverse healthcare settings.

Methodology: A total of 202 physicians participated, including 94 orthopedic surgeons and 108 ophthalmologists. ASD-related knowledge, readiness to treat, and perceived challenges were assessed using a validated questionnaire derived from the Knowledge about Childhood Autism among Health Workers (KCAHW) instrument. Statistical analyses, including t-tests and chi-square tests, compared the two specialties. Demographic variables, including years of experience and prior ASD training, were also evaluated.

Results: Ophthalmologists reported higher preparedness and greater familiarity with ASD-related care strategies. Despite these differences, both groups reported limited exposure to formal ASD training, highlighting substantial educational gaps across specialties.

Conclusions: Significant specialty-based disparities exist in physicians' knowledge, confidence, and preparedness for treating children with ASD.Expanding structured ASD-focused education across medical specialties could improve physician competence, enhance patient safety, and promote more equitable and effective healthcare for children with ASD.

P D71 Partnership Between Parents and Medical Specialists for Better Children's Eye Health

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Early childhood is associated with bigger risks for maldevelopment, as the visual system is morphologically and functionally immature. Prevention of children's eye health has a significant impact on the quality of life and must be an object of team care of parents and medical specialists.

Objective of the study: To study and analyse the awareness of parents and related health behaviour regarding prevention and children's eye health care.

Materials and methods: documentary, sociological and statistical methods have been applied. An empirical sociological study was conducted using a direct, individual, anonymous survey in the period August 2023 – October 2025 in the region of Varna, Bulgaria. The study is aimed at 1010 parents of children from 2 to 16 years of age who participated in the Child vision prevention program.

Results: Approximately one-third of parents (28.31%) were informed of current standards of eye care at young age. The proportion of parents (24.69%) who were not familiar whit amblyopia by the time of the study was similar. Most parents recognize the warning signs of myopia (61.63%), screen addiction (96.53%) and implement prevention strategies to reduce screen time. Approximately half of parents (43.57%) classify children's eye health care as a collaborative activity between parents and health professionals. One-fourth of the respondents (27.32%) attach great importance to parental proactivity in seeking specialist advice. For most parents (78.57%) eye care professionals and GPs are the trusted source of information on children's eye health.

Discussion: Parents' attitude towards vision care in early childhood, depends largely on the awareness. Counselling and training would improve this complex and multilevel process.

Conclusions: Working together and teaming up with parents, ophthalmic specialists and general practitioners in following the known preventive measures will contribute to better eye health and a better quality of life for the children.

P D72 Ophthalmological Manifestations in Hypophosphatasia

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Objective of the study: The aim of this study is to present the ultra-rare condition-hypophosphatasia (HPP). Ophthalmological symptoms can aid in diagnosis.

Materials and methods: HPP is a very rare genetic metabolic disorder caused by mutations in the ALPL gene, which encodes tissue-nonspecific alkaline phosphatase synthase. The disease affects multiple organs, and symptoms depend on the site of action of this enzyme. The most common symptoms involve the skeletal system, including early loss of primary teeth (odontohypophosphatasia), rickets, pathological fractures, and craniosynostosis. Symptoms also occur in the nervous system, including developmental disorders and seizures dependent on vitamin B6; the digestive system, including intestinal inflammation; the urinary system, including renal calcification and calcium-phosphate metabolism disorders; and the visual system. Ocular symptoms include conjunctival calcification, banded keratopathy, optic nerve drusen, optic nerve atrophy, and vascular bands.

Results: All these conditions are possible to quickly diagnose by ophthalmologist in normal eye examination. We want to show and organize these symptoms to make it easier to diagnose this disease.

Discussion: HPP is a rare disease, but it's diagnosable once its symptoms are known. An ophthalmological examination can aid diagnosis by taking a proper history of the parents. Early detection of the disease dramatically improves the patient's quality of life, as treatment exists to replace the missing enzyme (asphotase alpha).

Conclusions: Early diagnosis and treatment of hypophosphatasia can help children function and develop normally. We just need to promote knowledge about new, rare diseases that appear in childhood and it is treatable.

P D73 High astigmatism in children in tertiary hospital in Northern Greece: a prospective study

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Objective of the study: High astigmatism may lead to visual impairment, and can also be a sign of keratoconus, thereby posing a significant threat to pediatric ocular health. This study investigated the prevalence and characteristics of high astigmatism among children in Northern Greece and evaluated clinical outcomes following optical correction.

Materials and Methods: A prospective study was conducted between January 2019 and April 2026. A total of 1801 children aged 0-11 years attending the Pediatric Ophthalmology outpatient clinic of the 2nd Department of Ophthalmology in Greece, underwent cycloplegic refractive assessment using autorefractors and retinoscopy. High astigmatism was defined as an absolute cylindrical refractive error of ≥3.00 diopters(D). In bilateral cases, the eye with the greater cylindrical refractive error was selected (study eye). Data were analyzed using SPSS version 29.0.

Results: High astigmatism was identified in 43 participants (2.4%); 53.5% were female. Median age was 6 years (IQR:2.5), with a median follow-up duration of 5 years (IQR:3.5). Bilateral involvement occurred in 49% of cases. Median baseline visual acuity was 0.28 logMAR (IQR:0.335), while median astigmatic power was 3.00D (range:3.00-4.50D). Pentacam corneal tomography, performed in approximately half of cases, demonstrated no evidence of keratoconus. With-the-rule (WTR) astigmatism predominated (95.8%), whereas compound hyperopic astigmatism (44.8%) and mixed astigmatism (34.4%) were the most frequent refractive subtypes. Following full optical correction at baseline, median best corrected visual acuity improved to 0.08 logMAR (IQR:0.2). Astigmatism subtype remained stable, with median power being 3.25D (range:3.00-5.00D) and no keratoconus developed during follow-up.

Conclusion: The prevalence of high astigmatism in this patient series was relatively high. With-the-rule astigmatism and compound hyperopic astigmatism were the predominant subtypes identified. Early detection and timely full correction of the astigmatic error were found to lead to normal visual acuity. Long-term follow-up to update refractive correction and to detect potential keratoconus signs is indicated.

P D74 Why Dutch Residents Choose Pediatric Ophthalmology: A National Survey on Drivers and Barriers

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Objective: A global shortage of pediatric ophthalmologists threatens future pediatric eye care. North American studies (Hasan 2009; Kumar 2025) identify educational debt and lower remuneration as principal deterrents, but in publicly funded European training systems the relevant drivers may differ. This study aimed to identify the factors influencing career choice toward pediatric ophthalmology among Dutch ophthalmology residents and to examine the effect of the dedicated clinical rotation.

Materials and Methods: A cross-sectional, anonymous online survey was distributed to ophthalmology residents across all seven Dutch training regions. The instrument adapted the item structure of Hasan et al. (2009), expanded to twelve push and pull factors (–2 to +2), clinical-confidence statements and open questions. Subgroups were compared by rotation status (not yet started, currently undertaking, completed). Open responses were analysed thematically. Results Fifty-nine residents from all seven training regions participated; mean overall interest was 2.95/5.0. The strongest pull factors were the surgical–outpatient balance (+0.90), inspiring role models (+0.74), the intellectual challenge of pediatric ophthalmology (+0.67) and collaboration with orthoptists (+0.60). The principal push factor was parent interaction (–0.40); income perspective was neutral (–0.02). Diagnostic confidence in core pediatric ophthalmology domains was low: 71% disagreed with feeling adequately skilled, with no improvement after the rotation. Mean interest declined modestly from 3.11 before to 2.76 after the rotation (p=0.34), but variance increased markedly (Levene p=0.02): the proportion of residents at the extremes of the interest scale rose from 5% to 35%.

Discussion: Dutch barriers to a pediatric ophthalmology career are predominantly experiential rather than economic, in contrast to North American findings. The rotation does not raise mean interest but polarises it, sorting residents into convinced advocates and convinced opponents.

Conclusions: Securing the pediatric ophthalmology workforce requires earlier and prolonged exposure, structured diagnostic and surgical training, and visible role models. These findings will inform an EPOS-endorsed pan-European replication.