reaching up to 60% of the cases. We report 2 cases with amblyogenic orbital hemangioma that has been treated with oral propranolol with remarkable response.

Methods: We reviewed 7 patients with orbital capillary hemangioma that presented to our clinic between 2012-2018, Of these, 2 cases displayed amblyogenic astigmatism, with refraction +0.50 −7.00 ×170 of the right eye and +0.5 −7.50 ×160 of the right eye of an 11-month-old girl and a 2-month-old boy, respectively. Oral propranolol was started with dose of 0.3mg/kg/day TID then gradually increased. Refraction was recorded after initiating propranolol.

Results: The first case showed refraction of +2.00 −2.50 ×180 7 months after starting treatment, while the second case showed refraction of +4.00 −4.50 ×70 after 9 days of starting treatment, and 1-month follow-up displayed +3.00 −2.50 D ×135. Adverse events were not encountered.

Discussion: Oral propranolol has decreased the cylindric power in both cases with 64.29% decrease in the first case in the course of 7 months, and 66.67% for the second case, in 1 month, however propranolol demonstrated a rapid improvement in after only 9 days of starting the treatment reaching to −4.50 DC down from −7.50 DC with over 35% drop in cylindric power.

Conclusions: Oral propranolol decreases cylindric power significantly to nonamblyogenic levels in orbital hemangioma in a short duration varying from 1 to 7 months.

045 The relationship between optic canal size and severity of papilledema in children with intracranial hypertension. Anastasia A. Alex, Hilliary E. Inger, Hersh Varma, Catherine O. Jordan, Shawn C. Aylward, Jeremy Jones, David L. Rogers

Introduction: Bony optic canal size has been proposed to affect the dynamics of cerebrospinal fluid pressure from the cranium to the subarachnoid space within the optic nerve sheath. This may contribute to variations in clinically observed optic nerve edema (ONE) in patients with intracranial hypertension (IH). The purpose of this study was to determine if a relationship exists between optic canal size and the grade of clinically observed ONE in pediatric IH patients.

Methods: Presenting ophthalmologic exam information and the results of intracranial imaging were collected retrospectively for 35 pediatric IH patients (70 eyes). Volumetric T1 magnetic resonance imaging (MRI) brain scans were reviewed by a neuroradiologist who was masked to the ONE grades. Cross-sectional area (CSA) of the narrowest region of the optic canal was measured using OSIRIX software. Spearman correlation and ANOVA testing was performed to study the relationship between CSA and ONE grade.

Results: Optic canal CSA and ONE were not significantly correlated ($r = 0.02$; $P = 0.84$). There were no significant differences among average optic canal CSA when compared according to ONE grade ($F [5,62] = 1.22$, $P = 0.31$).

Discussion: Although an association of the optic canal CSA and ONE grade has been reported previously in adults with IH, there was no significant relationship found in our study of pediatric IH patients.

Conclusions: Our study suggests that the optic canal size in children with IH may not be associated with the severity of papilledema observed on physical exam.

046 Quality of life and visual perception in children and young adults with anophthalmia and microphthalmia treated with ocular prosthesis. Marita Andersson Gronlund, Beatrice Casslén, Ylva Jugard, Rezhna Taha Najim, Marie Odersjo, Alexandra Topa

Introduction: The aim was to evaluate health-related quality of life (HRQoL), vision-related (VR)QoL and visual perceptual problems (VPPs) among anophthalmia (A) and microphthalmia (M) patients treated with ocular prosthesis.

Methods: Seveneteen individuals (mean age, 9.0 years; range, 1.7-32.8) with unilateral A/M participated. Four validated instruments measuring HR- and VR-QoL were used: (1) PedsQL, consisting of physical and psychosocial (emotional, social and school functioning) self-report (≥5years) and parent-proxy (2-18 years); (2) CVFQ (≤7 years); (3) EYEQ (≥8 years); 4) VFQ-25 (≥21 years). VPPs were assessed by history taking.

Results: A/M patients and their parents scored low in HR-QoL compared with controls (PedsQL total score: 60.9; 69.6 vs 83.0; 87.61; $P < 0.0001$). No difference between children and parents were found, however, parents trended to underestimate their children's emotional state. A/M children having subnormal visual acuity (VA; ft ≤20/32; logMAR ≥0.20), scored lower in school functioning compared with normal sighted A/M children ($P = 0.026$). CVFQ and EYEQ showed no difference in VR-QoL regarding A/M children compared with controls or children having subnormal VA or not. 8/12 A/M children exhibited VPPs in one or more areas compared with 4/118 controls ($P < 0.0001$).

Discussion: A/M individuals have poor HR-QoL and increased VPPs. No difference in QoL was found between children and parents even though the children trended to score lower in emotional well-being. Individuals with A/M having subnormal vision rated significant less capability in school functioning.

Conclusions: These neglected problems elucidate the necessity of thorough examination, individual assessment followed by appropriate treatment and support concerning children diagnosed with A/M treated with ocular prosthesis.

047 Structural changes of the ciliary body and ciliary processes measured by ultrasound biomicroscopy of primary congenital glaucoma in comparison to glaucoma following congenital cataract surgery. Laura Andrews, Laura Kueny, Camilo Martinez, Joy Li, Adrianna Lee, Osamah Saeedi, Moran Roni Levin, Mona Kaleem, Bethany Karwoski, Marlet Bazemore, Marijean Miller, Mohamad Jaafar, Janet Leath Alexander, William P. Madigan

Introduction: Glaucoma is an important cause of pediatric blindness. Our study aims to better understand ciliary body structural parameters and differences in patients with Primary Congenital Glaucoma (PCG) and Glaucoma Following Congenital Cataract Surgery (GFCCS).

Methods: This is an ongoing prospective comparative study conducted at Children's National Medical Center and University of Maryland comparing patients with PCG and GFCCS undergoing exam under anesthesia. Eyes without any ocular pathology are used for comparison. Longitudinal ultrasound biomicroscopy (UBM) was performed for all patients. Image analysis was performed using ImageJ software to measure 6 structural parameters of the ciliary body (CB) and ciliary processes (CP).

Results: Nine PCG eyes and 6 GFCCS eyes were compared with 25 control eyes. CP integrated density and CP area were significantly lower in patients with glaucoma compared to controls ($P = 0.0428$ and 00485, resp.). PCG CP thickness and CP integrated density were also significantly lower in comparison to GFCCS ($P = 0.0041$ and 0.000024 resp.). However, CB thickness was significantly lower in patients with GFCCS compared to PCG ($P = 0.01129$).

Discussion: Our study demonstrates quantifiable differences between the CB and CP in patients with PCG in comparison to both