

**ABSTRACT TITLE:** Outcomes of surgery for removal of visually significant hyperplastic persistent pupillary membranes

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**SESSION TITLE:** Anatomy **SESSION DAY & DATE:** Tuesday, May 7, 2013 **SESSION START TIME:** 8:30 AM **SESSION END TIME:** 10:15 AM

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**Study Group: ABSTRACT BODY:**

**Purpose:** Hyperplastic persistent pupillary membranes (PPM) obstructing the visual axis are rare among children. Among those born with the anomaly, most regress by age one. However, persistent clinically significant obstruction of the visual axis places a child at risk of amblyopia. Therefore, medical and surgical interventions are implemented to ensure clearing of the visual axis and optimal visual development.

There are many different approaches to surgical removal of PPM. We describe our specific surgical technique and the long-term visual and cosmetic results following PPM removal.

**Methods:** We retrospectively analyzed 10 cases of PPM removal in 6 patients. Each PPM was felt to be clinically significant based on poor visual acuity, poor retinoscope reflex, or inability to visualize the fundus. Cases of bilateral PPM underwent sequential surgery with the more visually significant membrane removed first.

Surgical technique employed a clear corneal incision. A viscoelastic agent was injected beneath the pupillary strands bowing them forward. Residual synechiae were peeled from the anterior lens capsule using a Sinskey hook. To complete the optical iridectomy, additional viscoelastic was injected beneath iris strands, which were cut using intraocular scissors. The pupillary membrane was removed with McPherson forceps. Miosis was pharmacologically induced to assess symmetric pupillary constriction.

Post-operative vision and cosmesis were recorded on follow-up.

**Results:** The PPMs were bilateral in 4 patients and unilateral in 2 patients. Age at time of surgery ranged from 2.5 months to 2.5 years (mean 14 months). Mean postoperative follow-up was 4.4 years (range 2-8 years). Visual acuity improved in all patients, ranging from 20/20 to 20/70. One patient was treated for anisometric amblyopia. No operative complications occurred.

**Conclusions:** Several techniques have emerged for management of clinically significant PPM including nonsurgical (e.g. neodymium-YAG laser) and surgical removal. This retrospective review demonstrates excellent outcomes with our technique.

Potential complications of PPM removal include iris atrophy, iridodialysis, and damage to lens. We did not encounter any of these complications in our cohort. The described technique for the surgical removal of PPM represents a safe and effective treatment. We observed excellent post-operative visual acuities and cosmetic outcomes.

(No Image Selected)

**Commercial Relationship(s) Disclosure:** Courtney Kraus: Commercial Relationship: Code N (No Commercial Relationship) Gregg Lueder: Commercial Relationship: Code N (No Commercial Relationship) **Grant**

**Support:** No **Support Detail:** none **Clinical Trial Registration:** No **Other Registry Site: Registration Number:**