Persistent Fetal Vasculature (PFV)

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Persistent Fetal Vasculature (PFV)

- One of the most common congenital malformations of the human eye.
- Occurs when the vascular structures present during the development of the eye fail to regress.
- A common cause of unilateral congenital cataract.

PFV

- Appears at birth or shortly thereafter
- Usually sporadic
- Unilateral in 90% of cases
- Eye is smaller than normal
- Squint, amblyopia
- Leukocoria

PFV

Risks of cataract surgery

- Increased Intraoperative & postoperative complications.
- Glaucoma is a known complication after cataract surgery in young children.

The presence of PFV increases the risk of glaucoma 3 times

. Poor visual outcome.

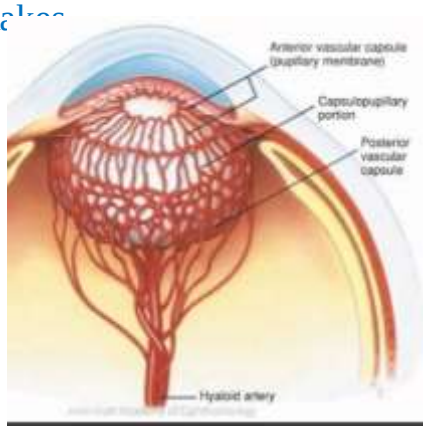
PFV

Reese (1955) first described the disease as
Persistent Hyperplasic Primary Vitreous (PHPV)

Goldenberg (1997) gave a more accurate name , Persistent Fetal Vasculature (PFV) to include all the pathology through the system : vasculature, iris, lens, vitreous, retina & optic nerve

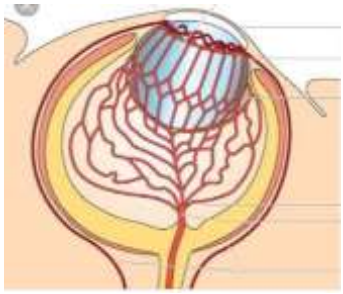
Hyaloids Vascular System

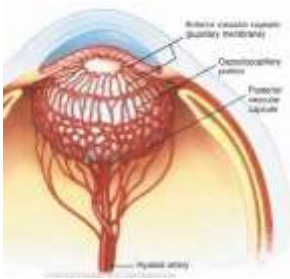
- The Hyaloid artery enters the optic nerve, proceeds anteriorly to form the Tunica Vasculosa Lentis (TVL)
- Anterior progression of TVL makes the Pupillary membrane

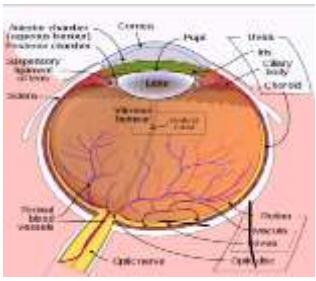


Hyaloids Vascular System

- The Hyaloids Vascular system begins to form in the fourth week of gestation
- It reaches maximum activity in the third month
- Begins to regress by fourth month
- Disappears before birth







PFV

- Some or all of the components of the components of the fetal vasculature may remain after birth
- PFV may cause several clinical varieties
- Manifestation may be categorized as :
  - Anterior
  - Posterior
  - Combined

Persistence of Anterior Lental fibro vascular tissue

- Persistent Pupillary membrane
- Pigment stars on anterior lens surface
- Pupil deformity, ectropion or entropion uvae
- Radial iris vessels
- Lens subluxation

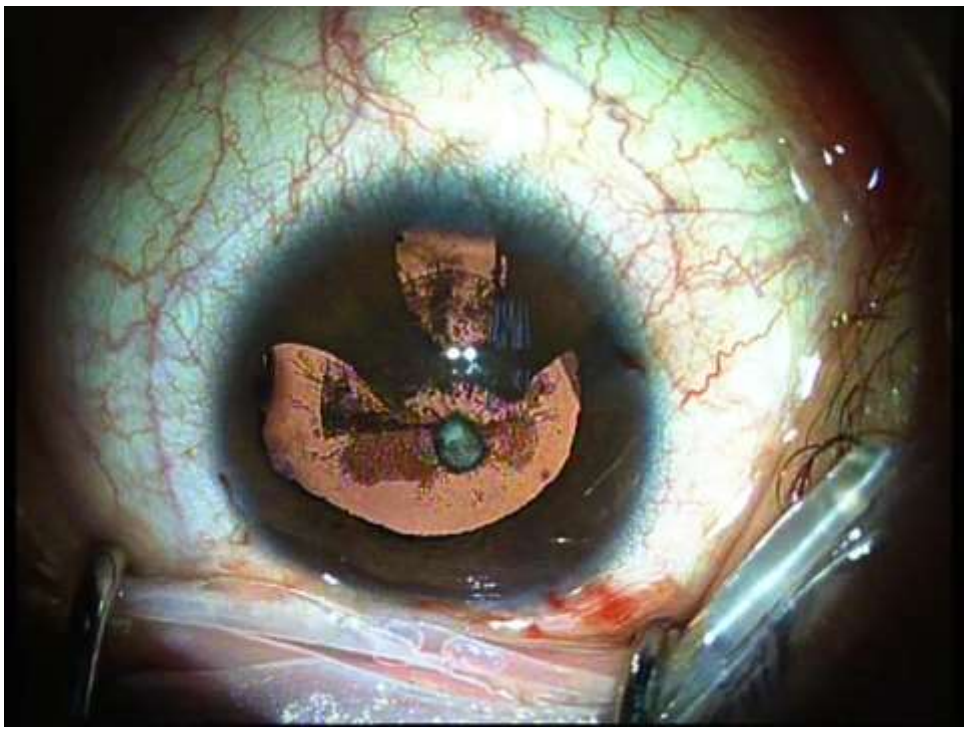
  (regression of iridohyaloid vessels allow growth of zonules)

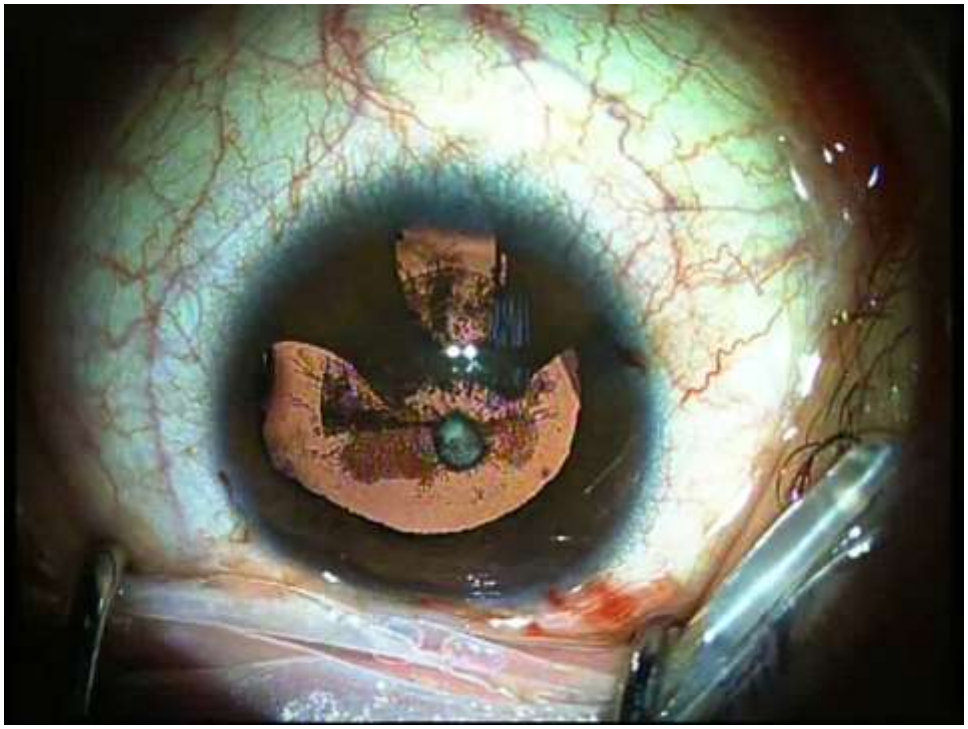
Persistence of posterior Lental fibro vascular tissue

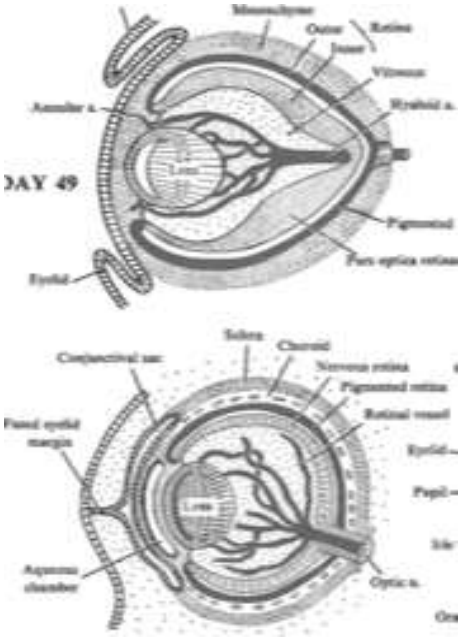
- Mittendorf spot
- Retrolental membrane
- Elongation of ciliary processes
- In severe cases lens may be pushed forward causing AC & secondary glaucoma

Posterior subtype

- Bergmeister papilla
- Retinal tent
- Retinal detachment
- Retinal dysplasia
- Optic nerve hypoplasia






Mesenchyme
Retina
Vitreous
Eyelid
Pigmented
Eyelid
Sclera
Choroid
Conjunctival sac
Pigmented retina
Eyelid
Lens
Optic n.