

Management of Orbital & Periocular Vascular Anomalies

Maher Assem, *FRCS-Ed*
Consultant Oculoplastic Surgeon
Egypt

Orbital Vascular Lesions

Vascular Tumours

cellular Proliferation

- = Infantile Hemangioma
- = Congenital „
- = Hemangiopericytoma
- = Hemangioblastoma

ISSVA, 1999 uses
Orbital Society

Consensus
Statement.

■ Vascular Malformation

abnormal channels

- 1) **High Flow** (AV Malformation)
Intra. Trans. **Or** Periorbital
- 2) **Mixed flow**
AV Fistula
- 3) **Low flow**

* **Venous Malformation** VM

- = Distensible
- = Non-distensible (cav. VM)

* **Lymphatic Malformation** LM

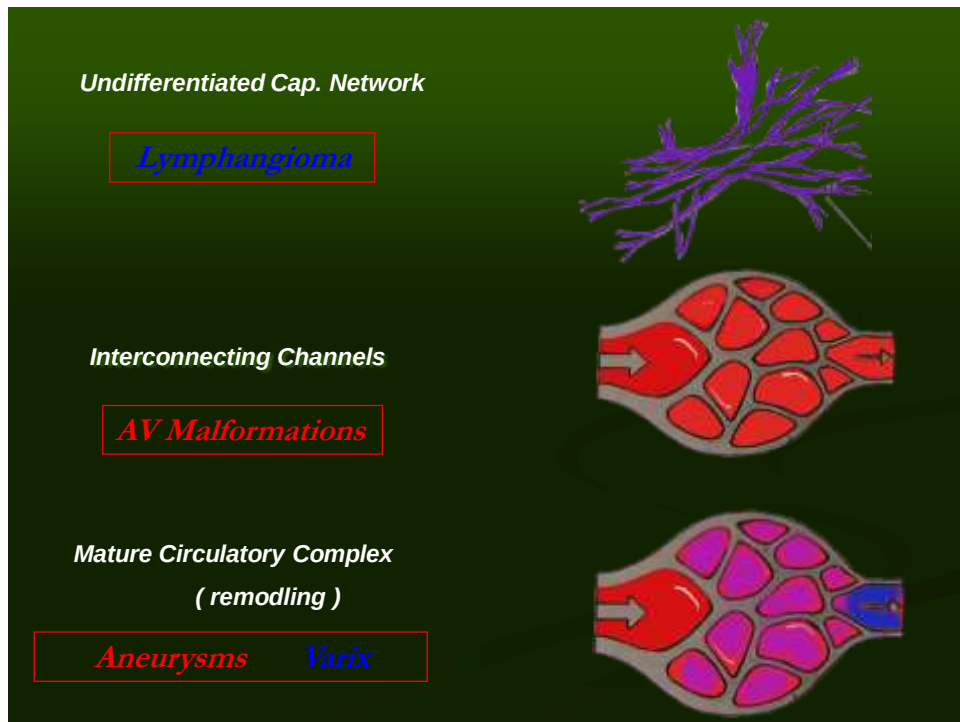
Macrocytic, Microcytic, Mixed

* **Combined** LVM.

Understanding Haemodynamics & Pathophysiology

Cellular Components of BVs

- Endothelial Cells
- Smooth Muscle Cells
- Pericytes



Assessment of Flow Dynamics

- History
- Exam. -- Inspection (e or e out Valsalva)
 - Palpation
 - Auscultation
- Imaging -- Non Invasive (Doppler U/S, CT, MRI, contrast ,CTA, dynamic MRA, MRV)
 - Invasive (Digital Subtraction Angiography **AVM**)

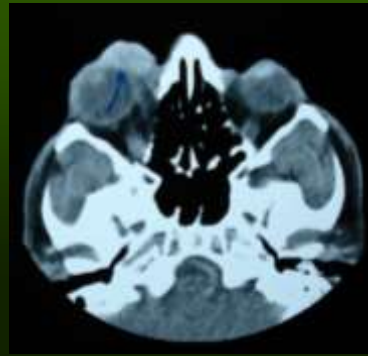
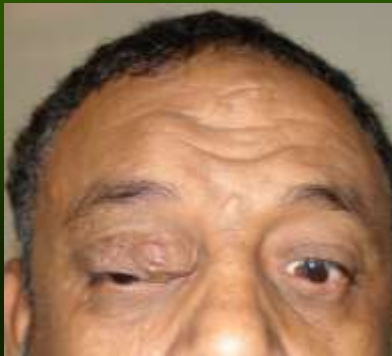
Inspection (Orbital Varix)



Speed of Inflation & Deflation

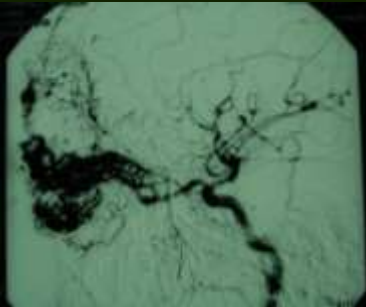
+++ / +++

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Palpation



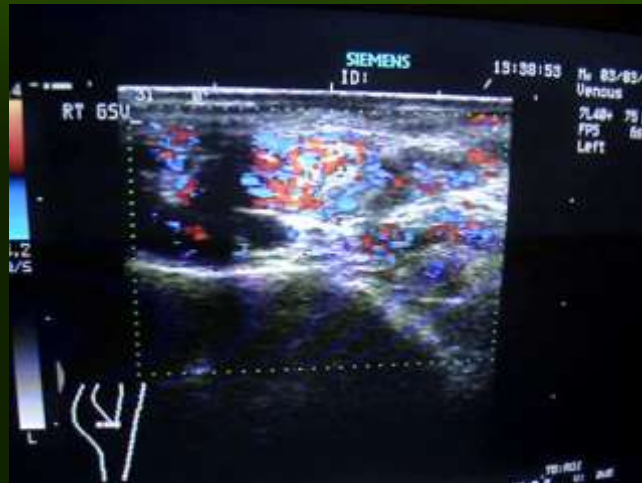


AV Malformations

Assessment of Flow Dynamics

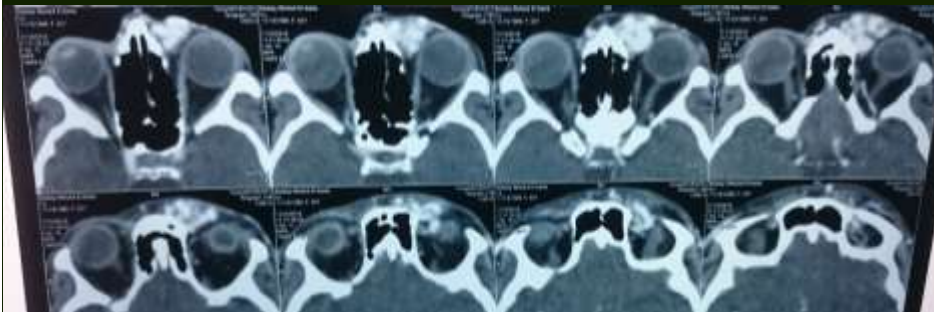
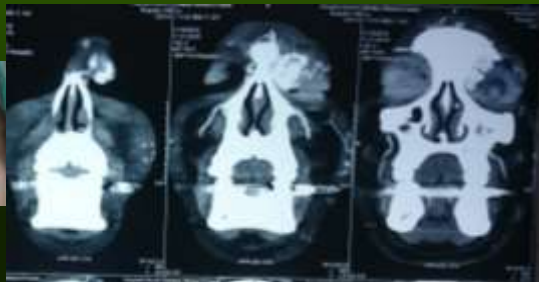
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Doppler Ultrasonography



AV Malformations

DP-MDCTA





Digital Subtraction Angiography

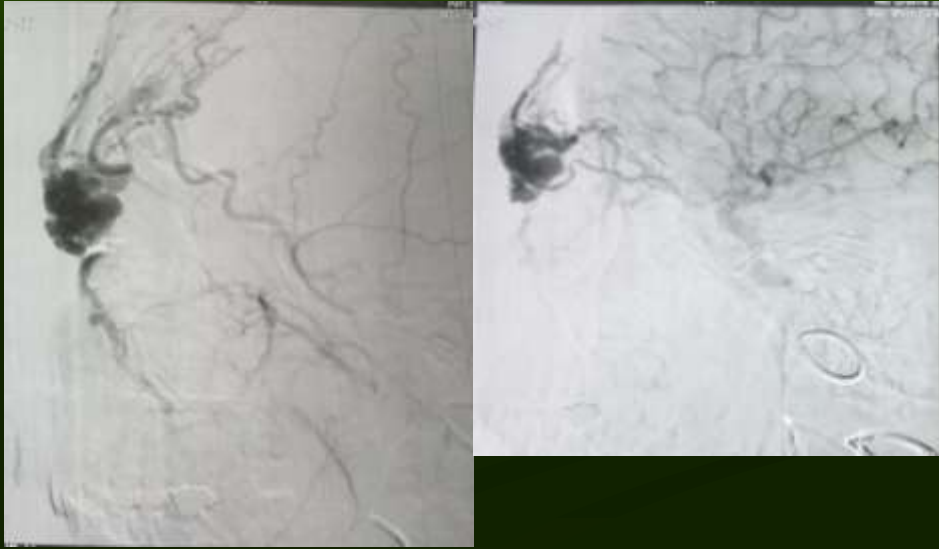


ICA



ECA

Digital Subtraction Angiography



Cases

Orbital Vascular Lesions

■ Vascular Malformation

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3) *Low flow*

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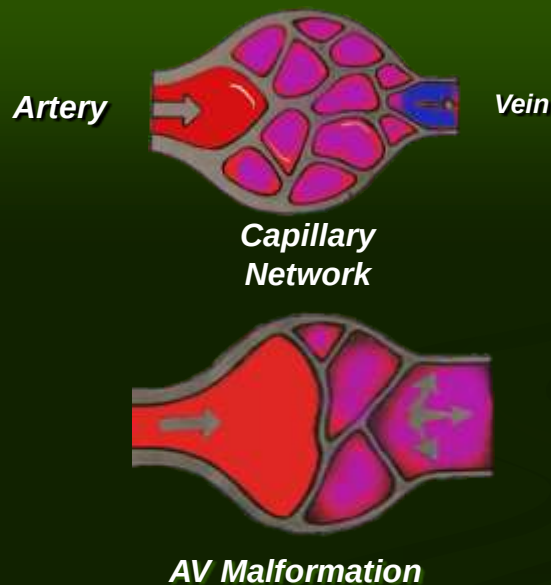
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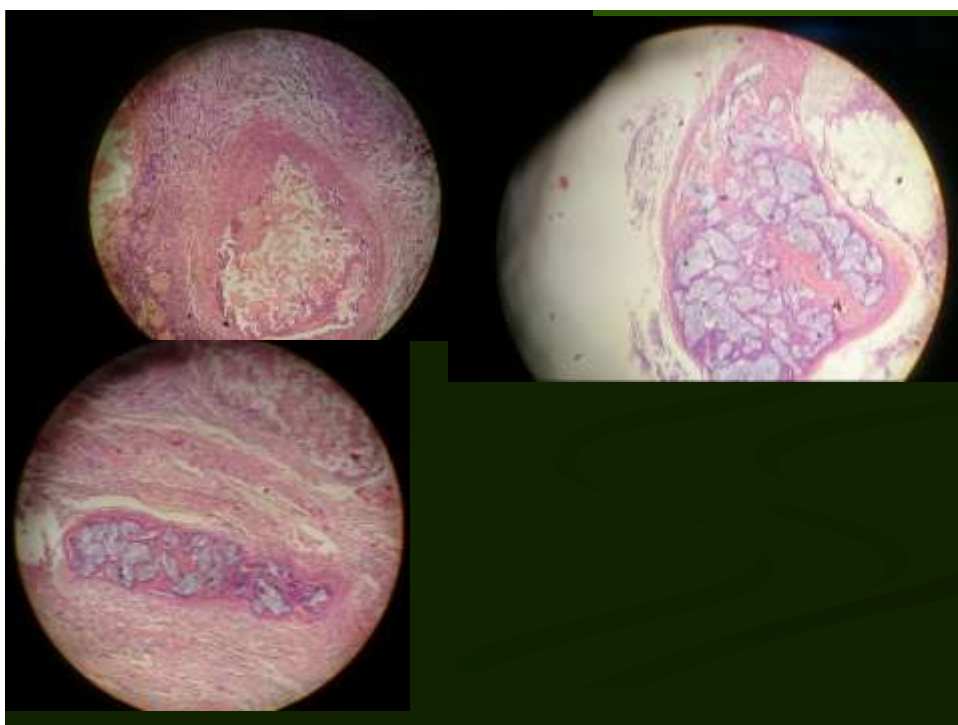
Macrocystic, Microcystic, Mixed

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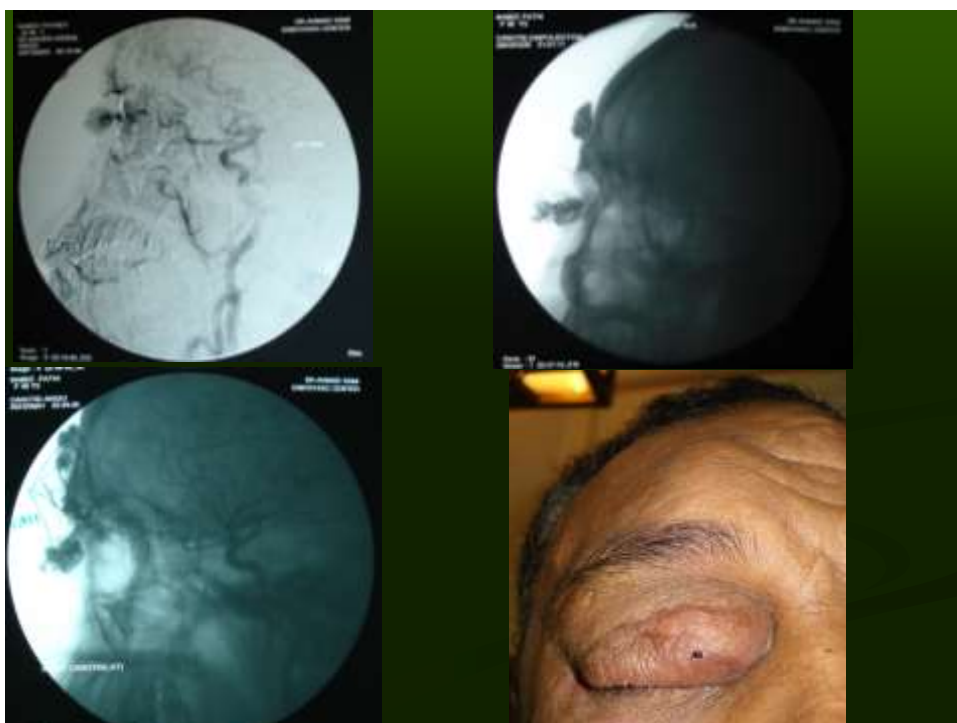
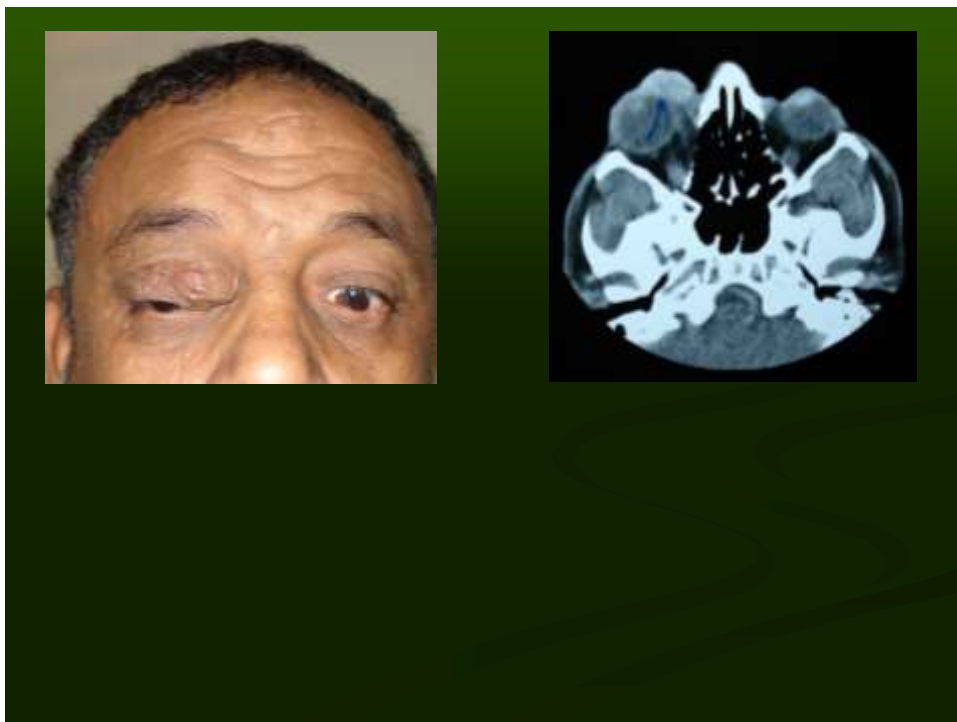


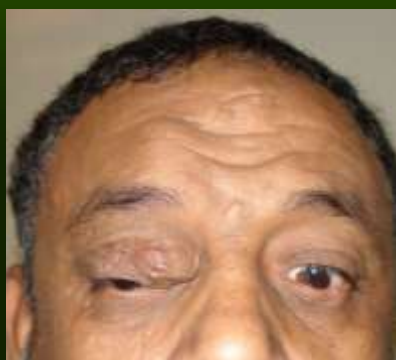
High Flow AVM











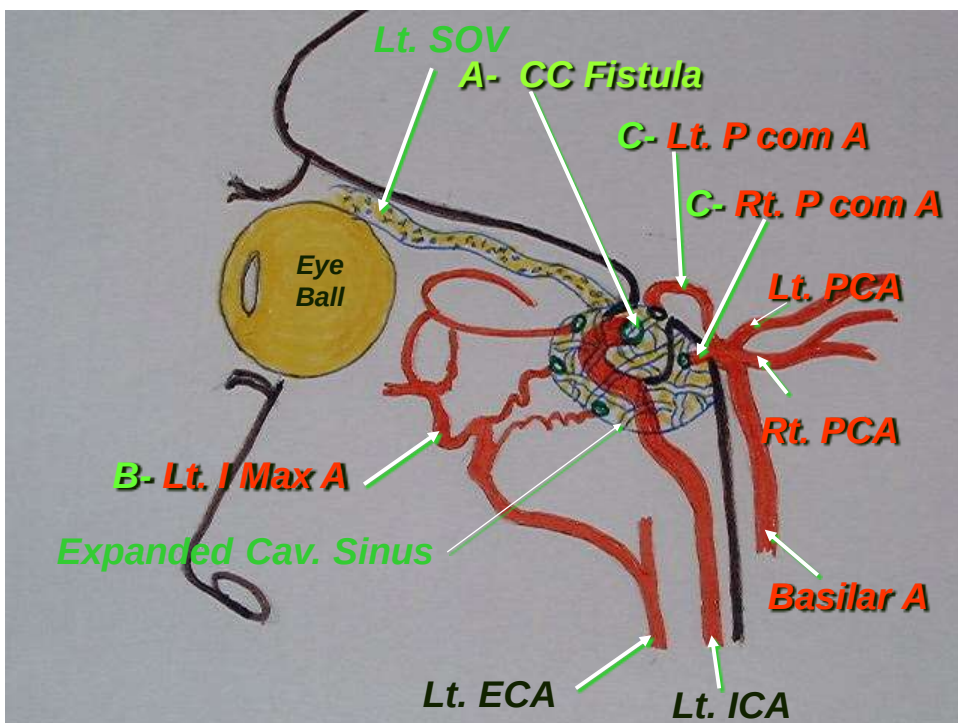
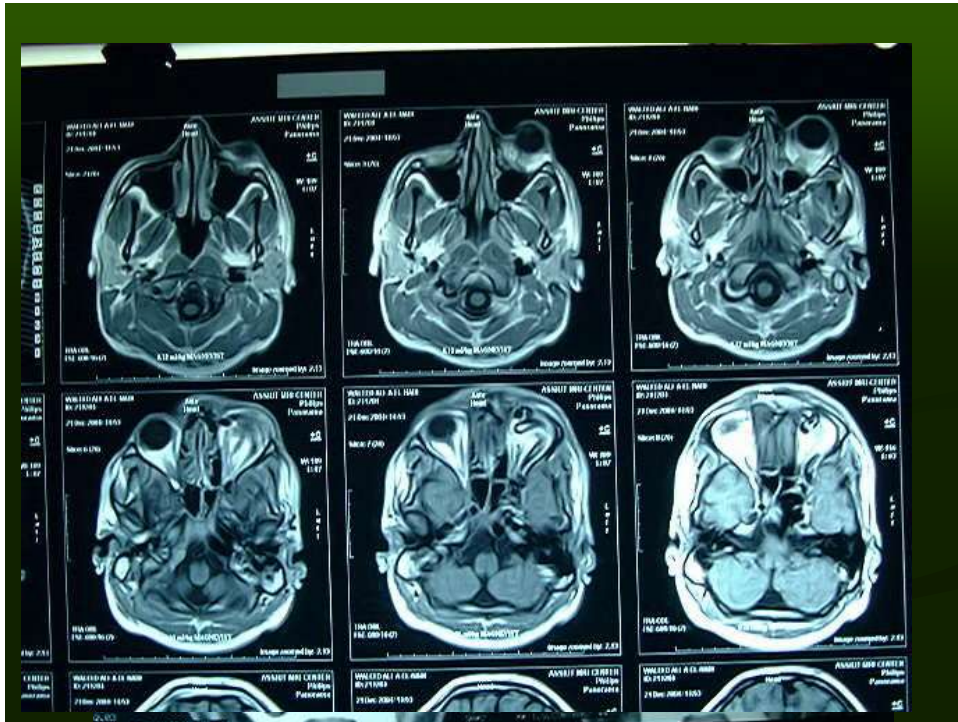
Pre-op



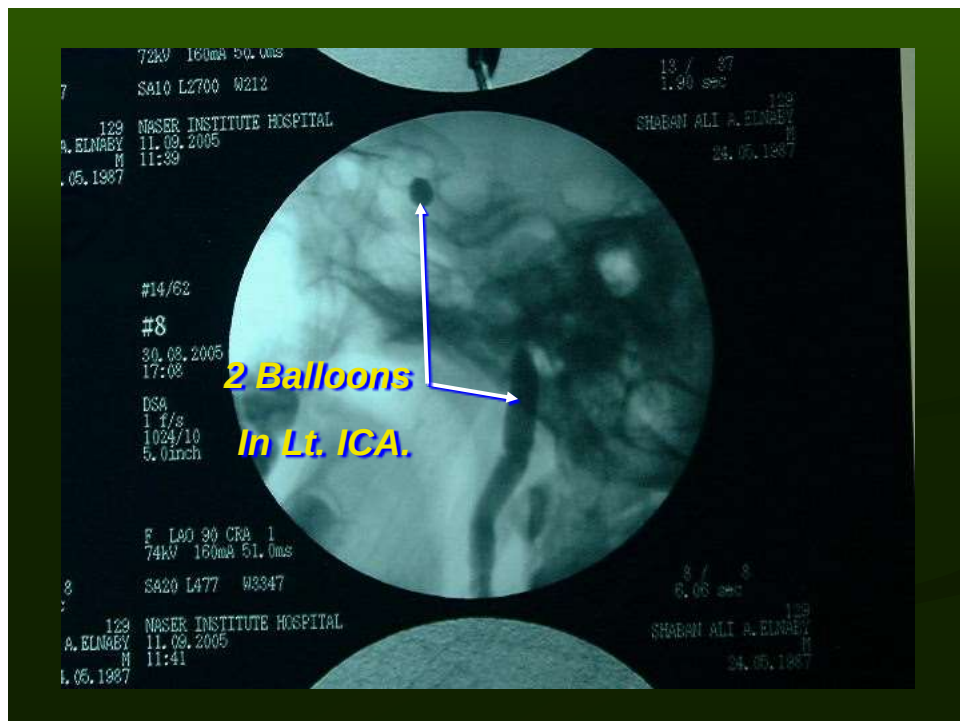
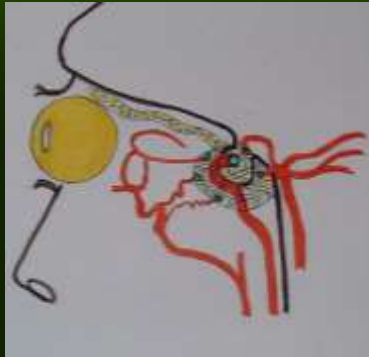
Post-op

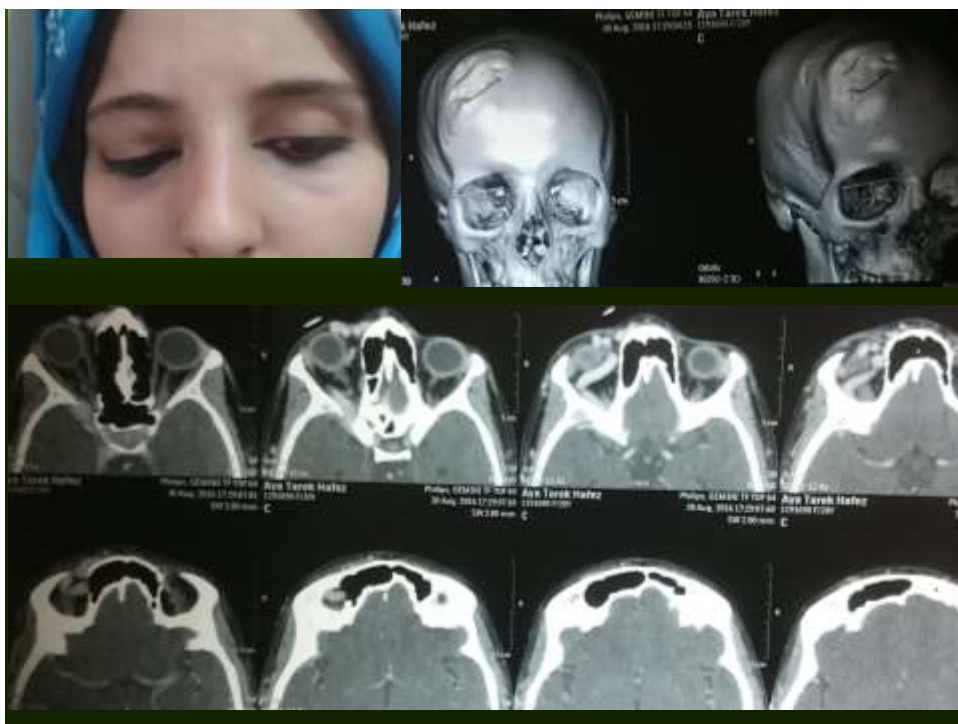
Mixed Flow (AV Fistula)

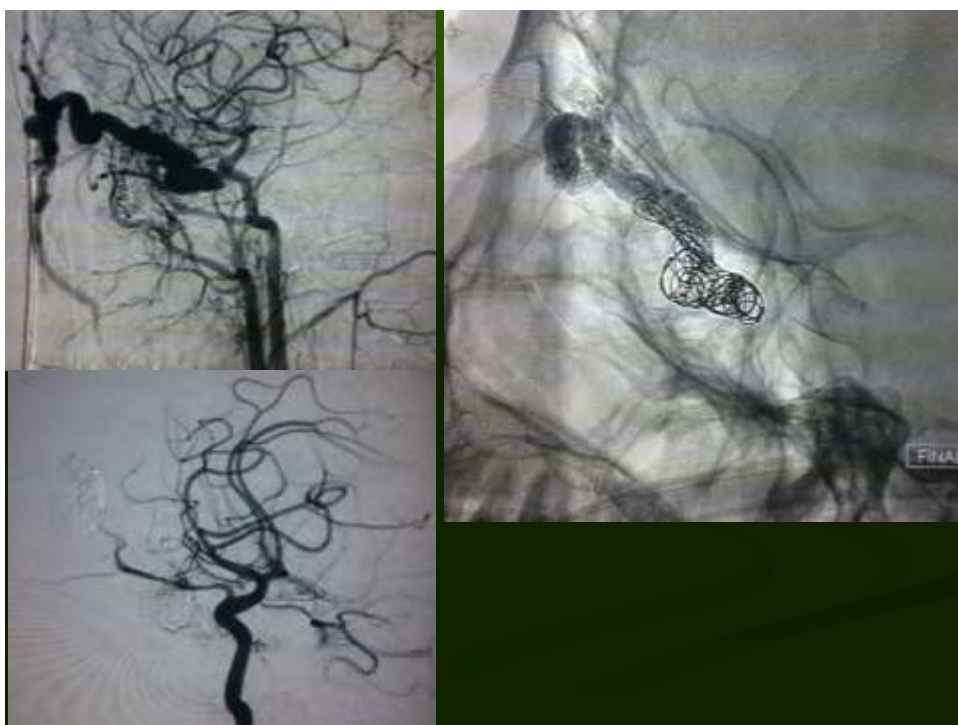




ICA. Balloon









III – Low Flow Malformation

Lymphatic Malformation

■ Microcystic LM

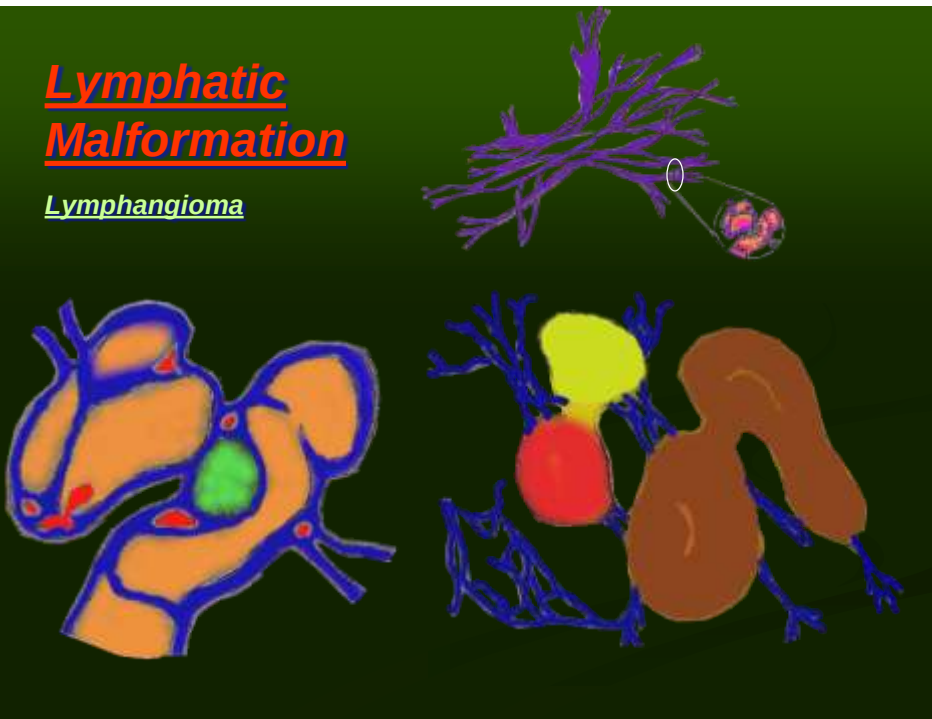
- < 2 cm
- Solid
- Infiltrative lesions
- Found more anteriorly
- More prone to rec. hge

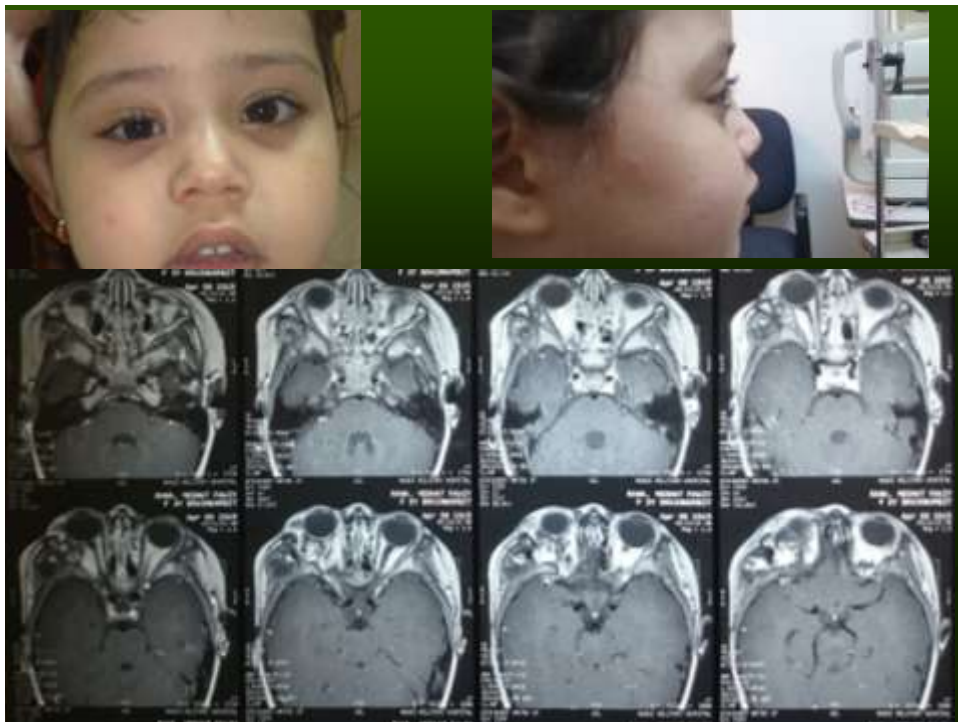
■ Macrocystic LM

- > or = 2 cm
- Fluid – fluid level
- Intraconal space
- More stable

Lymphatic Malformation

Lymphangioma





Evalon (Poly vinyl Alcohol sponge)

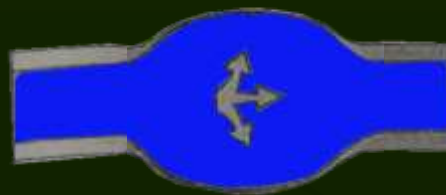




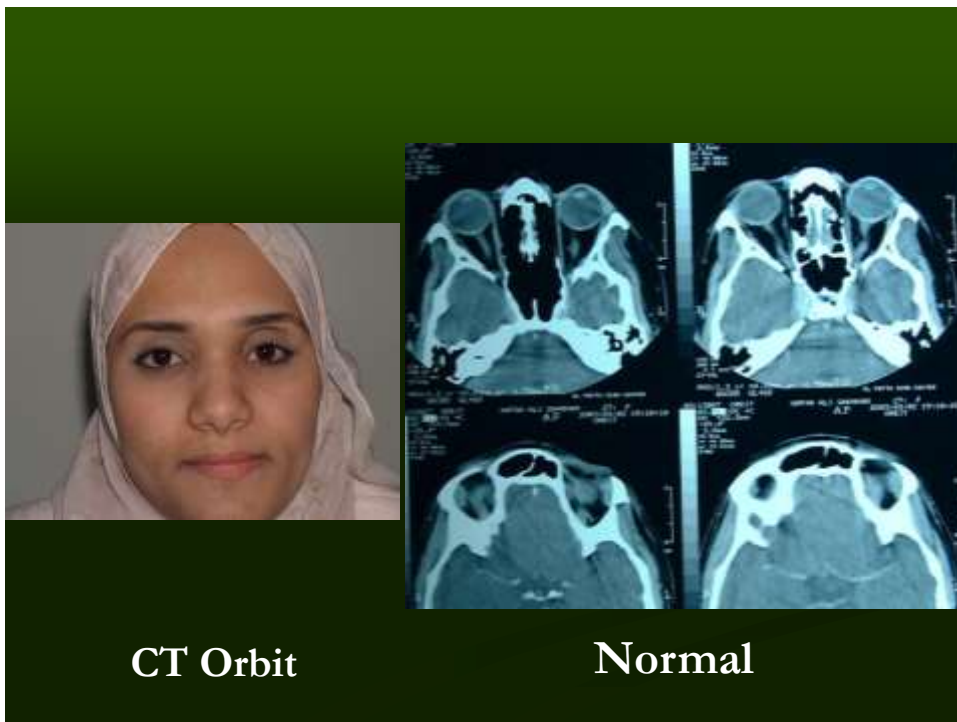
- * Observation
- * Surgical debulking
Hge , Chocolate cyst ----
- * Macrocystic --- U/S guided
Aspiration
+ Bleomycin A5
or Doxycycline injection



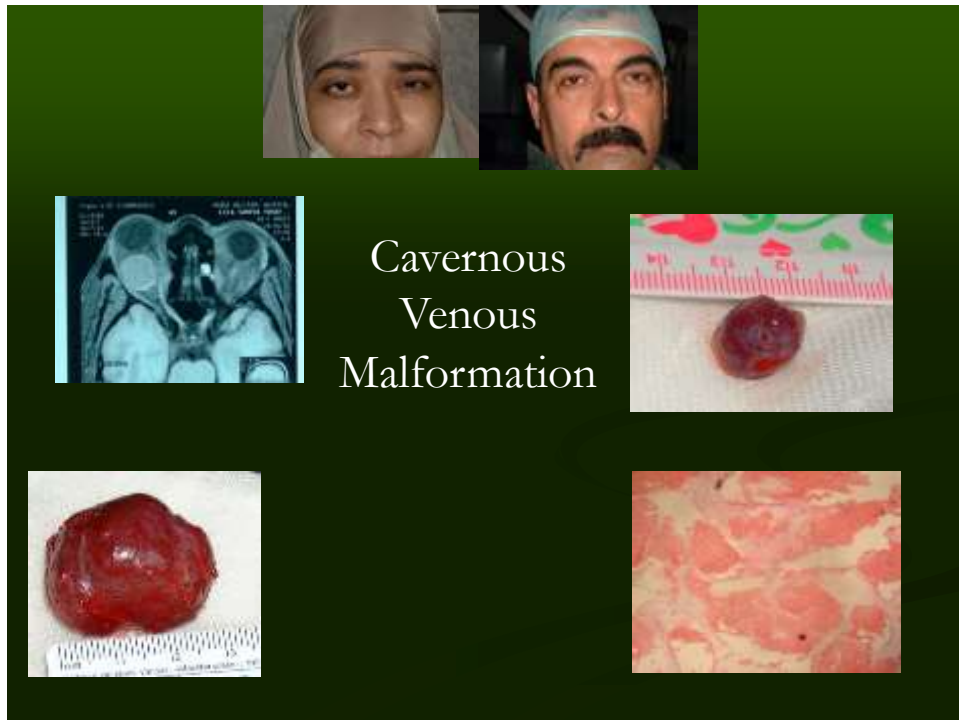
Venous Malformation



1ry Varices







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Improving Management Outcome in *Orbital Vascular Lesions*

- Understanding
- Brave enough // // // // Wise enough
- Cooperation with others



Neoplasms

*Cap. H. Rapid enlargement →
Spontaneous involution*

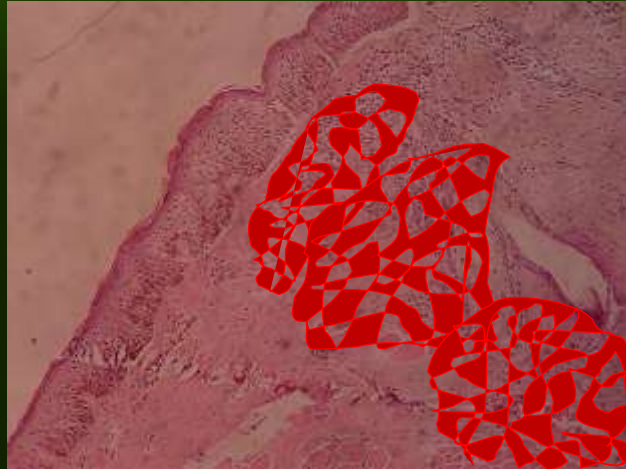
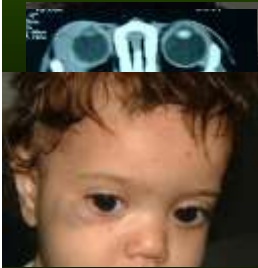
North et al. in 2001 (Arch Dermatol)

*their vascular endoth. expressed placental
associated Ags. not expressed by control tissues.*

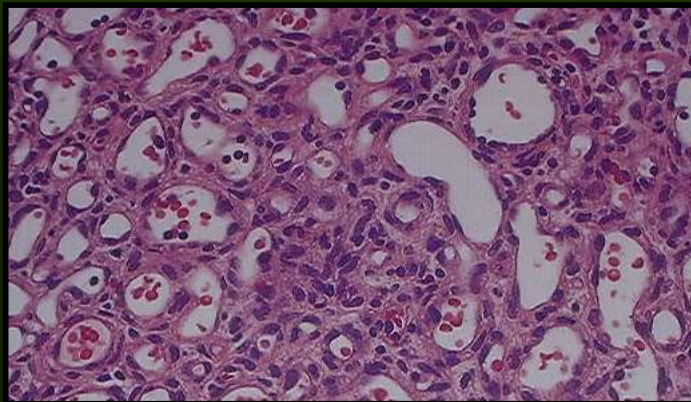
GLUT-1 (Glucose transporter molecule)

→ CH in infants could be sequestered tissue of
placental origin that grows rapidly due to the post-
natal escape from the intrauterine factors controlling
placental growth.

Capillary Hemangioma



Capillary Hemangioma



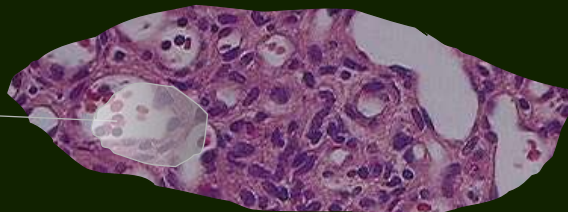
Treatment

None could be administered without risk

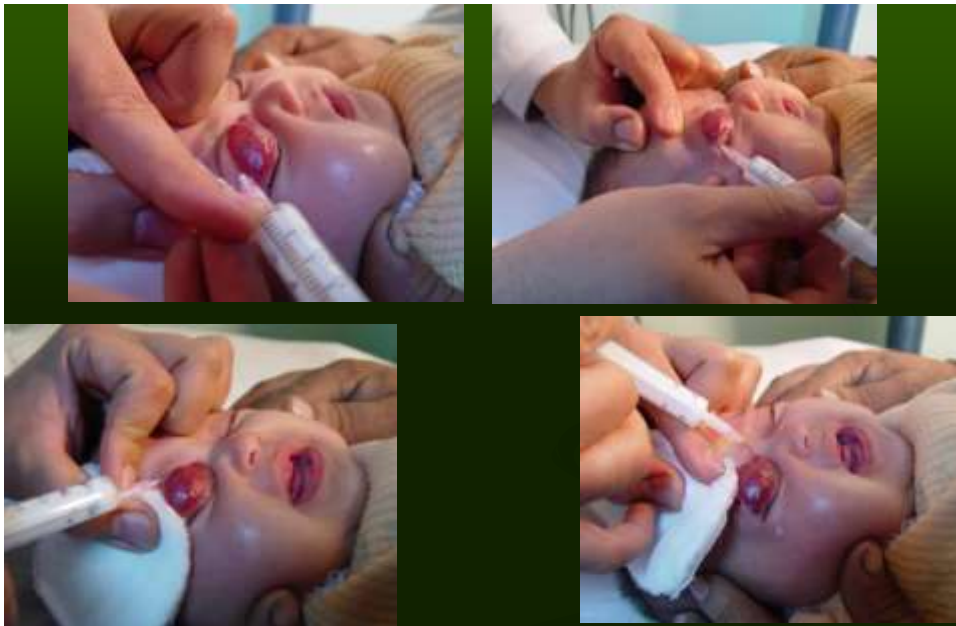
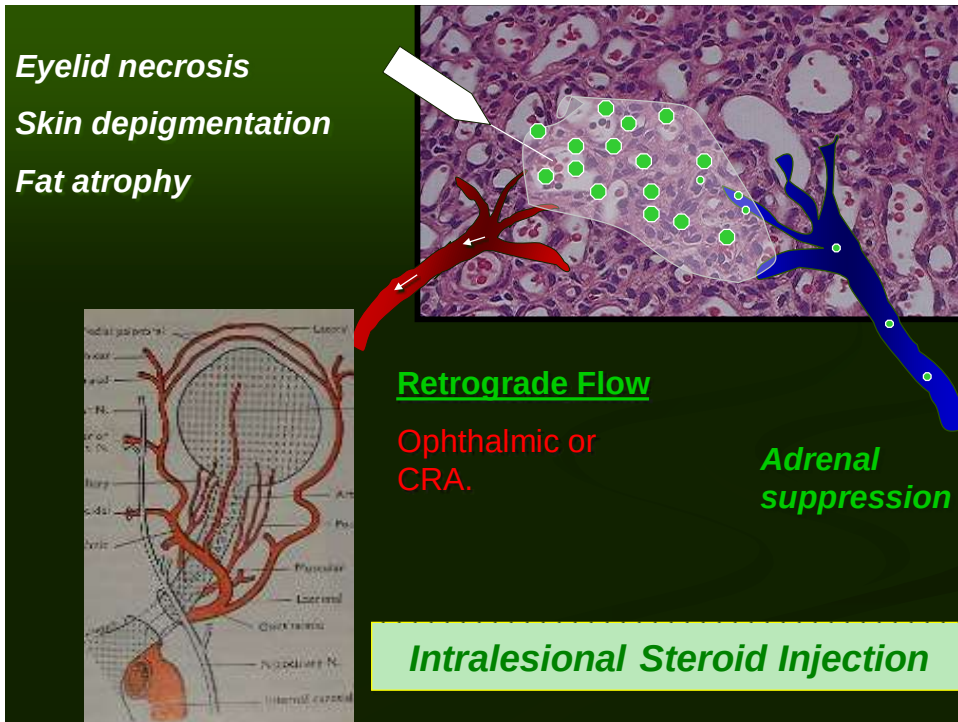
- Observation
- Corticosteroids (Oral, Intralesional, Perilesional, Topical)
- Lasers (Dye, YAG, CO₂)
- Radiation
- Interferon
- Surgical dissection

Intralesional corticosteroids

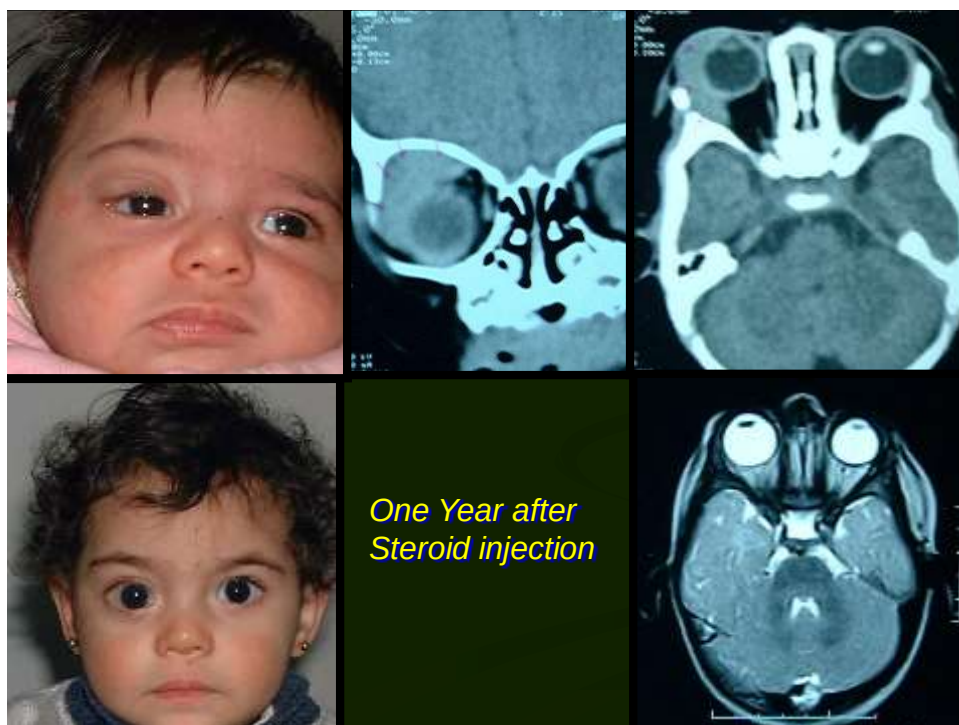
Triamcinolone 1ml (40mg / ml) +
Betamethasone 1ml (6mg / ml)



Kushner, 1977



Periocular Hemangioma, EOS March, 2005



Topical Steroids

Clobetasol Propionate
0.05 mg/ml
(Dermovate)

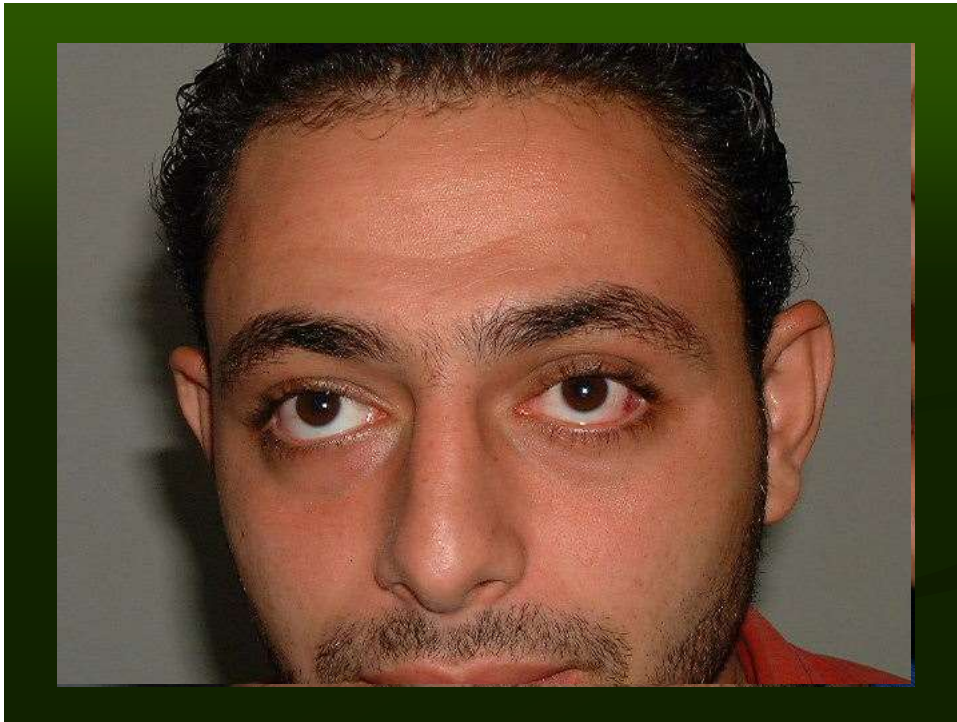
Intervention

Surgery

Interventional Neuro-radiology

3.5 months old baby







Hemangioendothelioma

CD-34^{+ve}



