



THE CHALLENGE OF MANAGEMENT OF BIG EYELID LESIONS

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Big vascular lesions of the eyelid



Classification

ISSVA Classification of Vascular Anomalies

(ISSVA: International Society for the Study of Vascular Anomalies)

Vascular Tumors

- *Benign vascular tumors*
 - Infantile Hemangiomas
 - Congenital Hemangiomas (CH)
 - Rapidly Involuting CH
 - Non-involuting CH
 - Partially involuting CH
- *Locally aggressive vascular tumors*
 - Kaposiform Hemangioendothelioma
 - Etc.
- *Malignant Vascular tumors*
 - Angiosarcoma
 - Etc.

Vascular Malformations

- *Simple Vascular Malformations*
 - Venous malformations
 - Lymphatic malformations
 - Arteriovenous malformations
 - Capillary malformations
- *Combined Vascular Malformations*
 - Arteriovenous malformations/fistulas
 - Capillary-venous
 - Capillary-arteriovenous
 - Lymphaticovenous malformation

Simplified/Modified from ISSVA 2014

ISSVA



ISSVA Classification

International Society for the Study of Vascular Anomalies

VASCULAR ANOMALIES

TUMORS	MALFORMATIONS	
	Low-flow	Fast-Flow
Infantile haemangioma	Venous malformation (VM)	Arterial malformation (AM)
	Capillary malformation (CM)	Arteriovenous fistula (AVF)
	Lymphatic malformation (LM)	Arteriovenous malformation (AVM)

Infantile hemangioma

- Most common periocular and orbital tumors of childhood that typically arise in infancy.
- 20 % of affected infants have multiple lesions.

Classification

Tissue depth

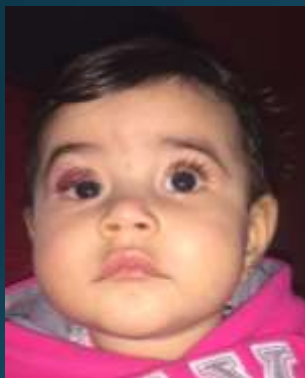
Morphological subtype

Pattern of growth

Tissue depth

- Superficial.
- Deep.
- Mixed.

Superficial



Deep



Mixed



Morphological subtype

This classification system may identify IH at risk for complications and/or associated internal abnormalities

- Focal
- Segmental
- Multifocal

Focal



Segmental



Multifocal



Pattern of growth

- 80% of their final size by 3 months of age and by 5 months, IH have usually completed most of their growth
- *Rapidly involuting congenital hemangioma (RICH)* involute by 14 months.
- *Partial involuting congenital hemangioma (PICH)*.
- *Non involuting congenital hemangioma (NICH)* can grow with age.



When to worry ??

- **Periocular**

Vision loss can be due to strabismus, anisometropia, or visual deprivation.



Periocular capillary hemangioma, size greater than 1 cm in diameter is an important predictor of amblyogenesis

When to worry ??

- **Beared/Perioral**



Subglottic hemangioma



Life threatening

When to worry ??

Facial segmental

Risk of PHACES syndrome

Posterior fossa abnormalities

Hemangioma,

Arterial abnormalities

Cardiac anomalies

Eye defects

Sternal cleft



When to worry ??

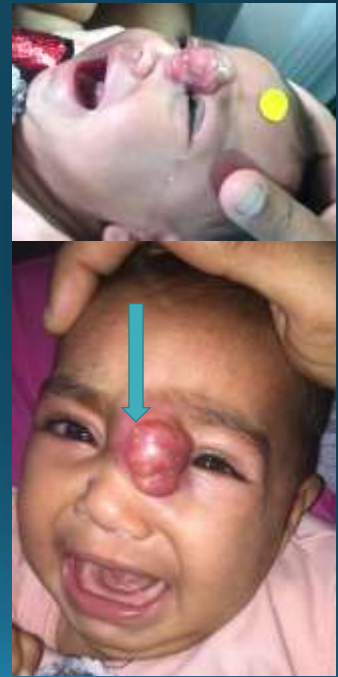
Multiple cutaneous

Visceral hemangioma in 50 % of cases – high output cardiac failure

When to worry ??

Ulceration

- Median age of 4 months.
- During rapid expansion.
- May be hemorrhage and sepsis.



Treatment

- When to treat?
- How to treat?

- **Visual indications.**
- Dermatologic indications.
- Systemic indications

Obstructive (nasopharyngeal, oral, or subglottic extension causing airway obstruction), hematologic (thrombocytopenia or hemolytic anemia), and cardiovascular (high-output congestive heart failure)

- Cosmetic ??

- Medical
- Laser
- Surgical

Medical

- Systemic treatment : propranolol, Steroids.
- Local : intralesional, topical.
- Laser.

Propranolol

- Currently is the mainstay in treatment.
- Dose: 2–3 mg/kg per day in two divided doses.
- The average treatment of duration is 6 months.
- Mechanism ? Vasoconstriction & decrease VEGF production.

Adverse effects

- Hypotension.
- Hypoglycemia.
- Bronchospasm.
- Insomnia & nightmares.

Systemic steroids

- Steroids inhibit angiogenesis and induce capillary regression
- Prednisone or prednisolone is administered in a single oral morning dose of 2 mg per kg per day for two to three weeks with gradual tapering over 3 weeks.

Positive response (within 10 days)

- Tactile softening.
- Lightening color.
- Slowed growth.

Rebound → *increase the dose for two weeks.*

No response → *stop.*

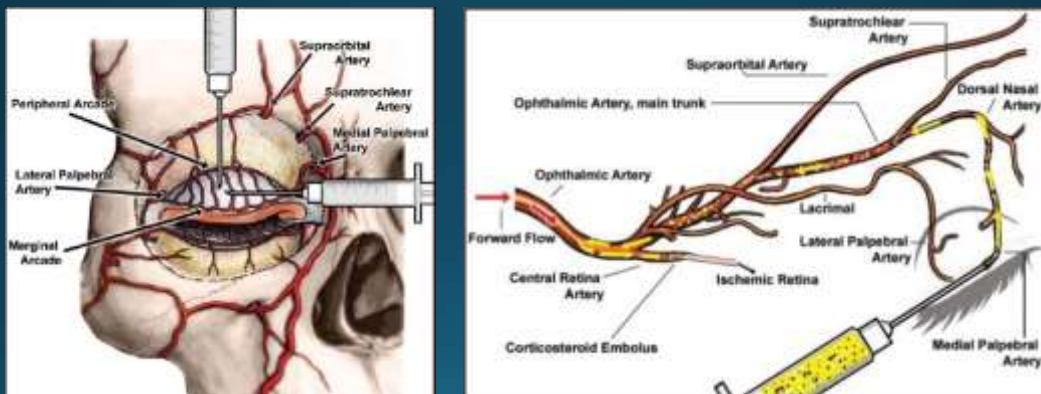
Intralesional steroids

- A combination of betamethasone acetate, in a dosage of 6 to 12 mg, and triamcinolone acetonide, in a dosage of 40 to 60 mg, administered with a 30-gauge needle.
- A response occurs within one week; additional injections are required in four to eight weeks.
- Three to five injections.

Complications

- Eyelid necrosis.
- Plaque deposits.
- Fatty or soft tissue atrophy.
- Central retinal artery occlusion.

How to inject?







Six months



Eight months



One year



Three months



One year



Two years



Three years



Four months



Six months



One year



10 years

Laser therapy

- Flash lamp pulsed dye laser (FPDL) penetrates to a depth of 1.8 mm and has a low risk of scarring.
- Neodymium:YAG (Nd:YAG) laser, with a coagulating depth of 5 to 6 mm, is recommended in the treatment of rapidly growing mixed or deep hemangiomas.





Partial response with
intralesional steroids

One month later with
oral propranolol



Three months

Six months after
two injections

One year after 3
injections

Two years

- Big vascular lesions of the eyelid may be sight threatening or even life threatening.
- Timing of treatment is important, the sooner the better.
- Systemic propranolol and/or intralesional steroids are the mainstay of treatment.

Proposed treatment plan

- Start with intralesional steroids.
- No response within 10 days ,shift to oral propranolol with close follow up.
- Systemic steroids in cases of systemic affection.

Thank you

