SIMPLE CASES AND BEYOND: DO YOU TALK OCULAR TUMORS !!!

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VICE PRESIDENT, MEACO

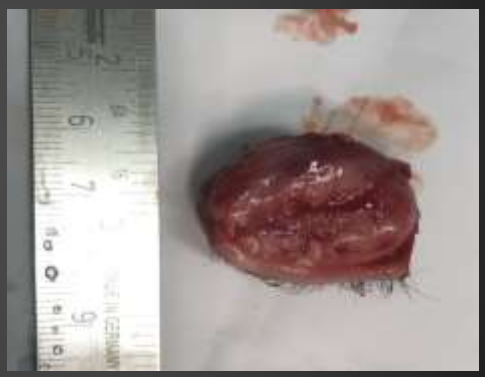
TFOS AMBASSADOR

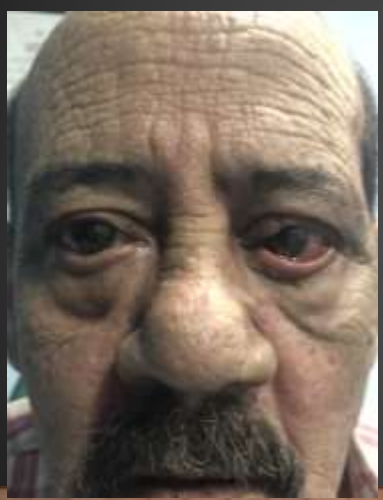
CASE 1: 58 YOM

CHALAZION → SURGERY X 2 ……SEB GL CA

TUMOR EXCISION, FROZEN SECTION CONTROL

MAJOR RECONSTRUCTION: BRIDGE FLAP



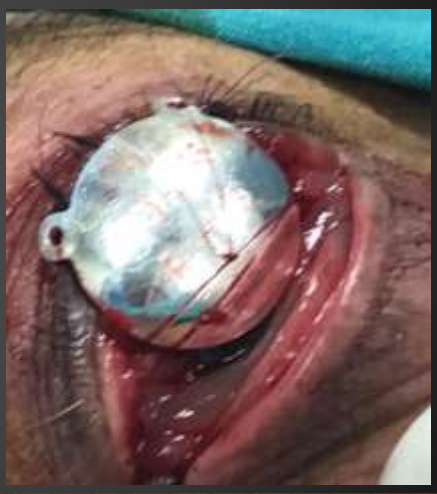


CASE 2:
64 YOM, EXCISION OF UL TARSAL MASS
CONJUNCTO-PALPEBRAL MALIGNANCY

IDENTIFY TUMOR EXTENT

TUMERECTOMY ----------CRYOTHERAPY

CRYO DOUBLE FREEZE THAW……BRACHYTHERAPY



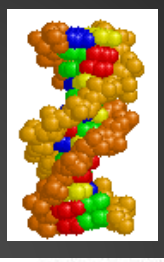
1 MONTH ……18 MONTHS

36 MONTHS

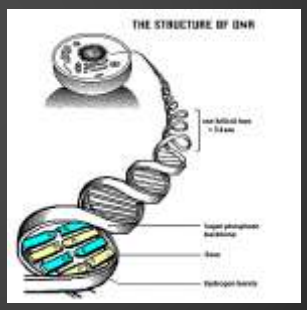
RADIATION TYPES

- Alfa particles: positive electrical charges (helium/proton)
- Beta particles: negative charges
- Gamma rays: no electrons:
  - Gamma rays are similar to x-rays, but gamma rays originate in the atomic nucleus and x-rays from the peripheral electrons.

- The major goal of radiation:
  - Arresting cell mitoses by interfering with DNA synthesis
  - Destroy the reproductive integrity of a neoplasm



- The tissue destruction by ionizing radiation is accomplished by free radicals.



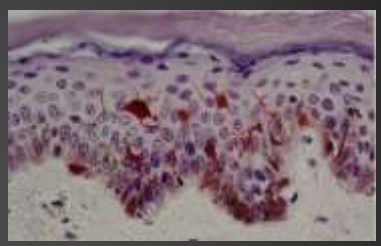
- Teletherapy:
  - Remote distance delivery
- Brachytherapy:
  - Near distance delivery

Isotope	Half-life	Type of radiation	Energy	Half-value layer	10% energy transmission opposite side(mm(	Advantages	Disadvantages
Cobalt 60	5.26 years	Gamma	1.17, 1.33 MeV	11 lead	lead 25	Long half- life Good tissue penetration	High energy restricts shielding from personnel
Iodine 125	60.2 days	Gamma	27-35 KeV	0.025 lead	lead 0.09	Easy to shield, appropriate tissue penetration, seeds permit individualized .plaque design	Shorter half-life
Palladium 103	17 days	Gamma	21 KeV	0.008 lead	lead 0.5	.As Iodine Higher dose rate may be radiobiologically beneficial	Very short half-life
Iridium 192	74.2 days	Gamma	o.38 MeV	lead 2.7	Lead 18	Good tissue penetration ,ease in customizing plaque design.	Easier to shield than Co , but not as easy as the others
Gold 198	3 days	Gamma	0.420 MeV	lead 5	lead 2	Good energy	Short half-life
Ruthenium 106	**366 days**	**Beta**	**3.5 Mev**	**lead 0.7**	**lead 1**	**Easily shielded, sharper dose falloff**	**Can only be used for thinner tumors(5 mm or less)due to limited tissue penetration**

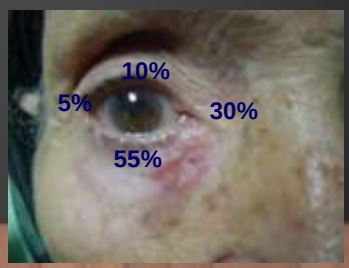
MALIGNANT EYELID EPITHELIAL TUMORS

Basal Cell Carcinoma

- Malignant cutaneous tumor arising from:
  - Basal layer of epidermis
  - Primary epithelial germ cells (pleuripotential embryonal cells) in the deepest layer of epidermis



- Aetiology:
  - >90% of eyelid malignancy
  - Related to sun-exposure in:
    - Fair complexion skin
    - Middle age or elderly
  - Distribution:
    - LL: 55%
    - Medial canthus: 30%
    - UL: 10%
    - Lateral canthus: 5%



- **Basal Cell Carcinoma**
  - Behavior:
    - Locally invasive
    - Does not metastasize

Types:

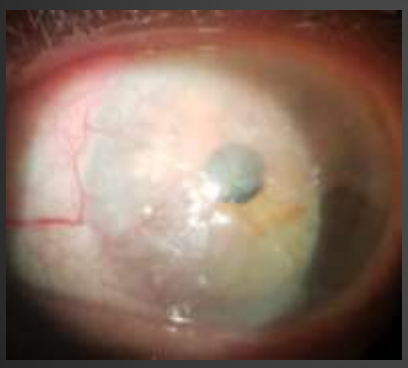
Nodular/ Noduloulcerative type:

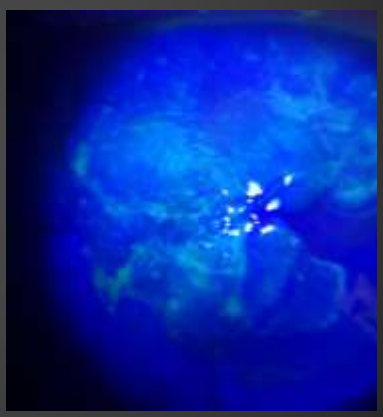
- Well defined elevated, firm erythematous nodule
  - Central crater or ulcer,
  - Tumor is locally invasive
  - Madarosis
  - Ulcerative:
    - Rodent ulcer: slowly enlarges with minimal scar formation
    - Borders: beaded, pearly, shiny and rolled-in
    - Base: indurated
    - Surface: pink, granular, and covered with a crust

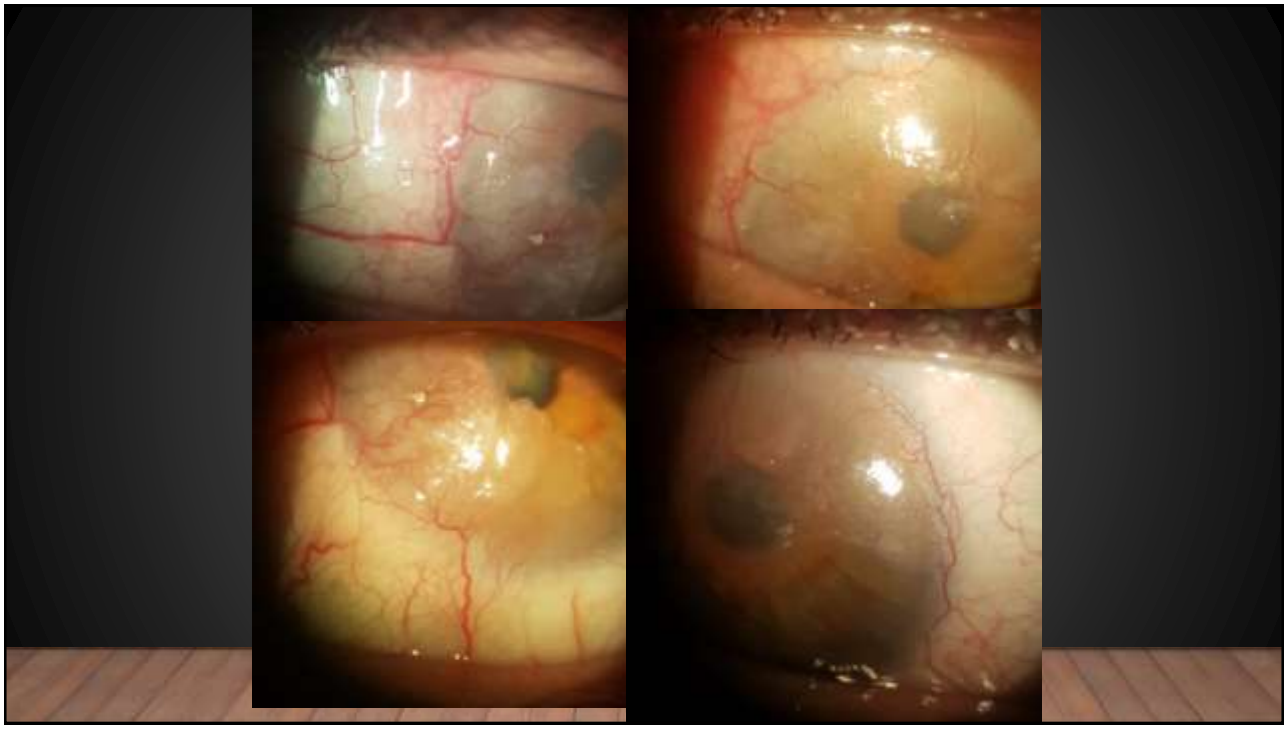
RODENT ULCER

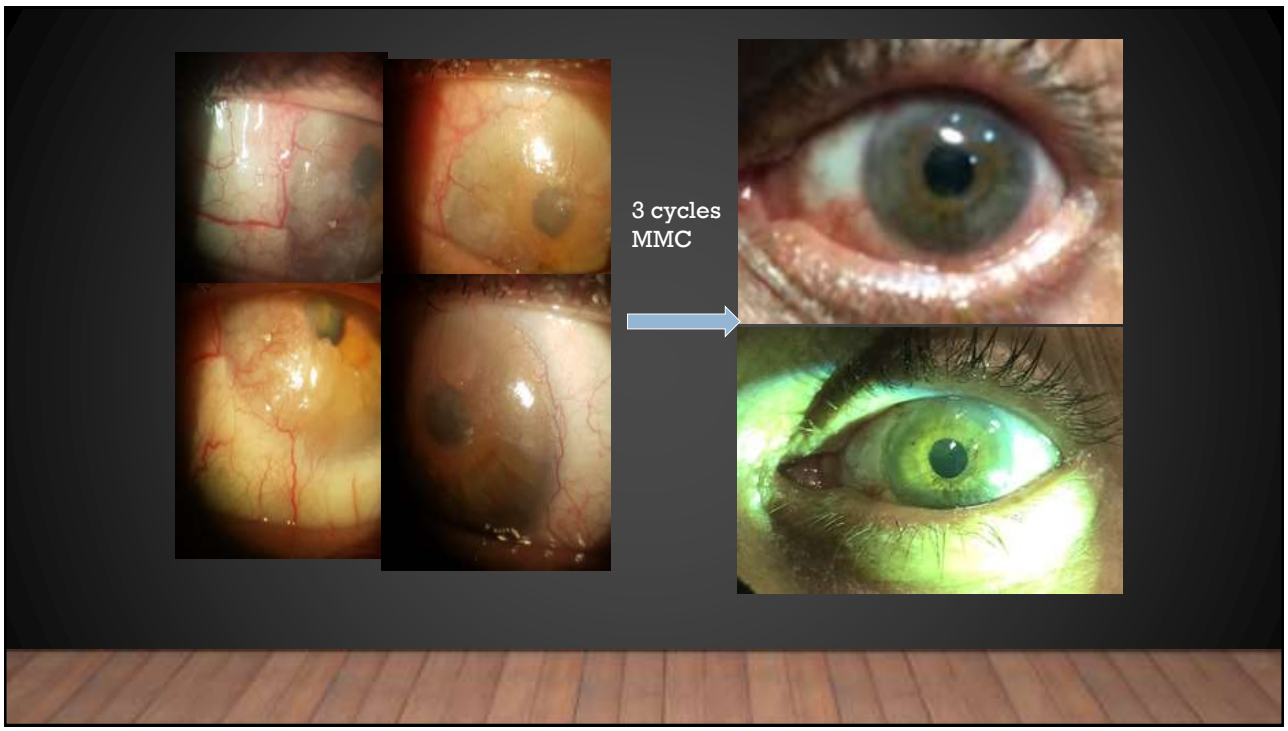
- C- Eroding the orbit
  - Tumor totally erodes, eyelids, eyeglobe and orbital soft tissue and orbital bone leaving a large defect.

CASE 3: DIFFUSE CIN, CORNEAL INVOLVEMENT AT 270°








3 cycles
MMC

NON-SURGICAL TOPICAL THERAPY OF CONJUNCTIVAL TUMORS:

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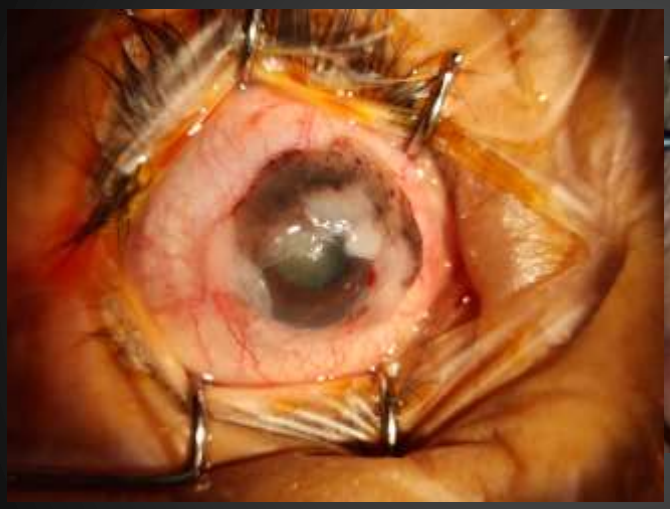
OCULAR SURFACE SQUAMOUS NEOPLASIA (OSSN)

- Premalignant and malignant alterations in the epithelium of conjuctiva or cornea
- Various terms in literature:
  - Squamous cell carcinoma
  - Conjunctival intraepithelial neoplasia
  - Conjuctival dysplasia
  - Ocular surface epithelial dysplasia
  - Conjuctival squamous intraepithelial neoplasia
- Classic presentation
  - Adult
  - Caucasian males
  - Excessive sun exposure

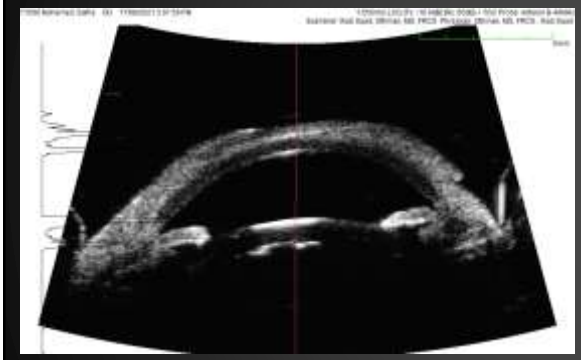
OSSN

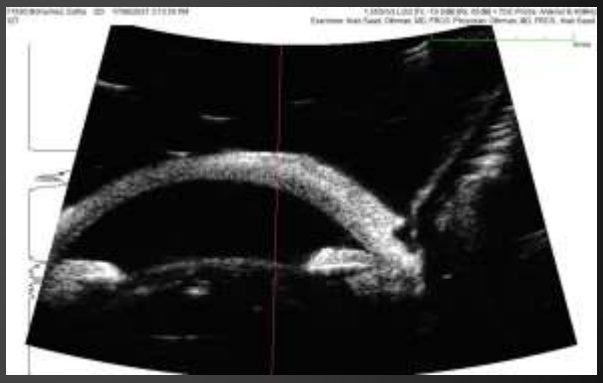
- Predisposing factors
  - Cigarette smoking
  - Radiation exposure
  - Eczema
  - Systemic immune suppression
  - Organ transplantation
  - HIV
  - Xeroderma pigmentosum
- Reported in pts with
  - Autoimmune disease
  - Degenerative
  - Traumatic
  - Toxic conditions

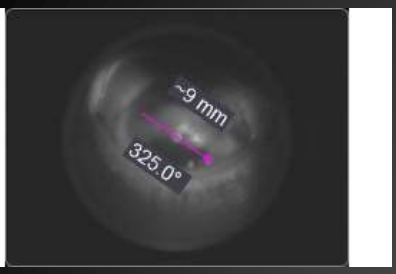
CASE 4: 70 YOF. OSSN

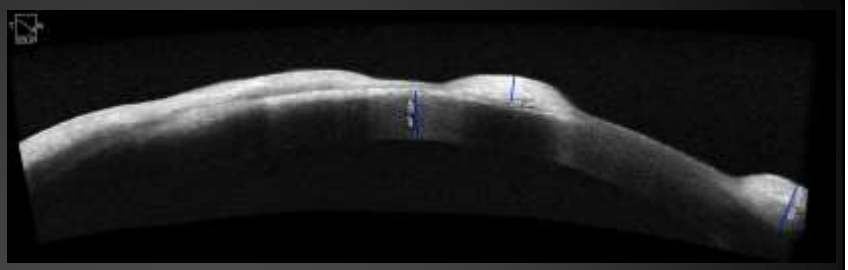


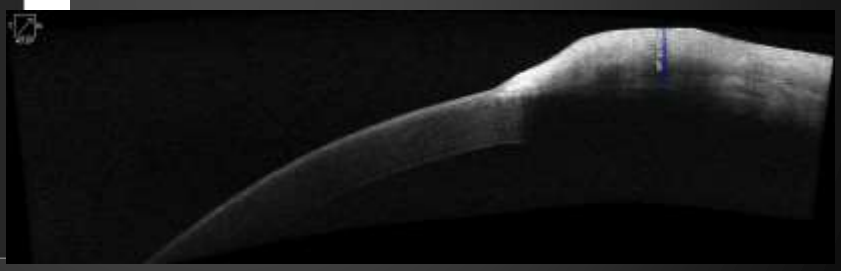
UBM

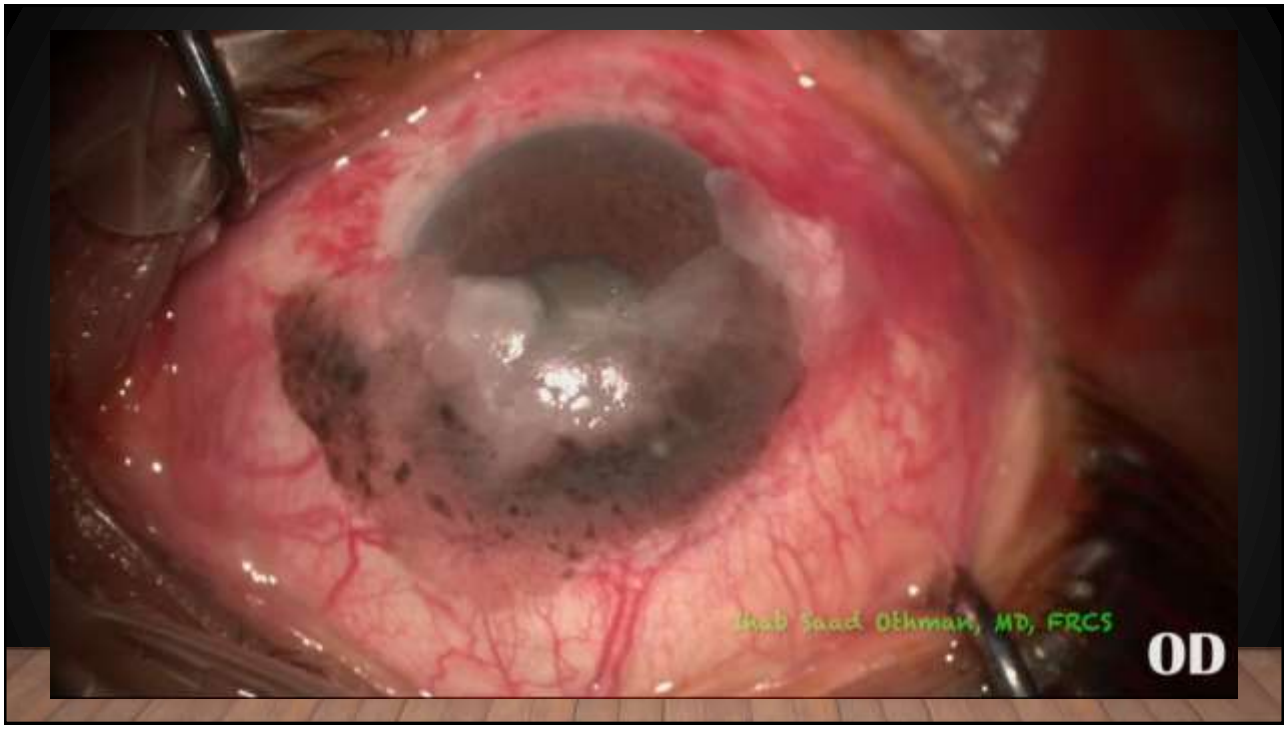


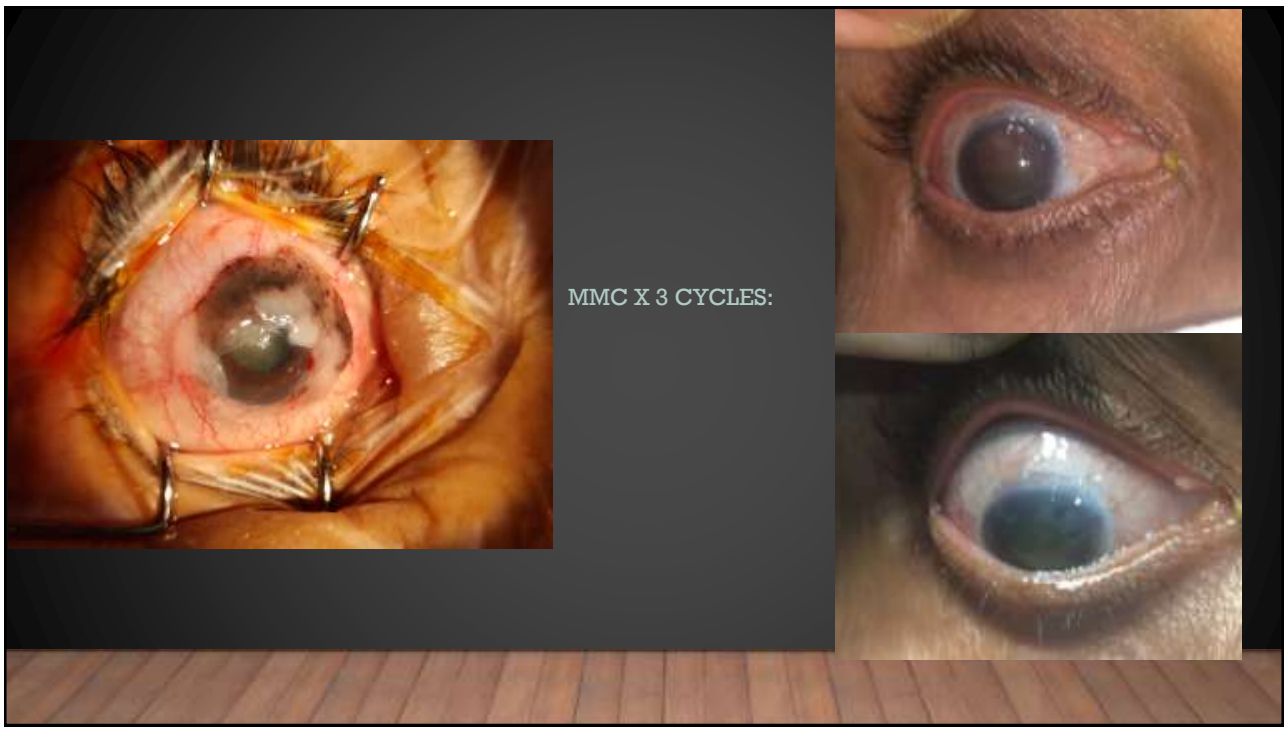









Ihab Saad Othman, MD, FRCS
OD


MMC X 3 CYCLES:

HISOLOGIC SURPRISE: RESIDUAL CIN/SCCA




ADJUVANT THERAPY: WHY AND WHEN

Pathology	Type	Treatment
Resection edge **positive**	Dsyplasia or CIN	Observation or topical chemotherapy
Resection edge **positive**	Invasive SCC	Re-excision
Resection **base positive**	Localized	Cryotherapy
Resection **base positive**	Diffuse	Plaque brachytherapy
	Patient prone to recurrence	Immuno-modulation

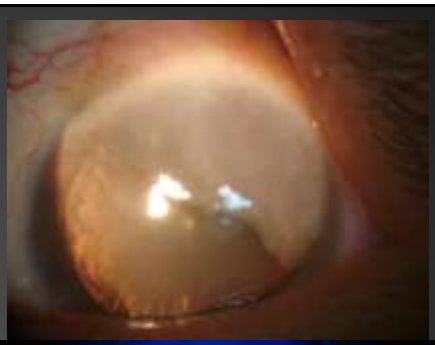
Honavar 2019

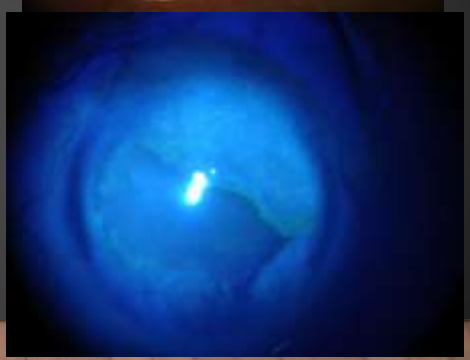
PRINCIPLES OF MANAGEMENT

- Identify extent (edge)
- Test motility
- Provisional diagnosis
- Investigations
- Have a clear plan about management

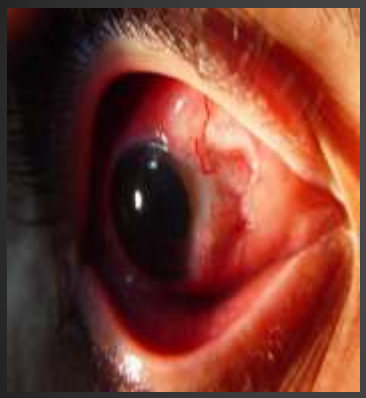
IDENTIFY EXTENT (EDGE)

- Fluorescein stain
- Rose Bengal stain

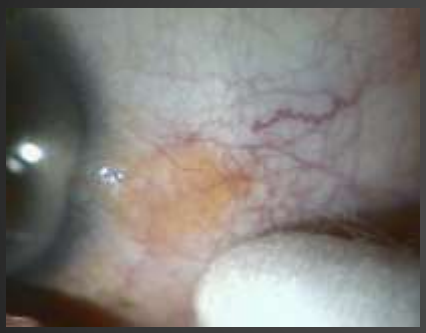


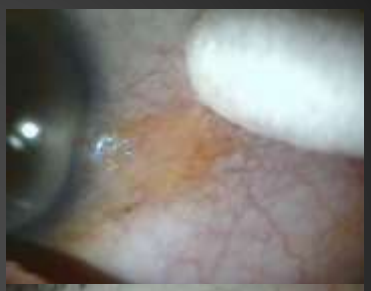


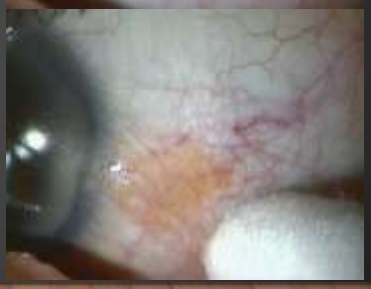
ASSESS THE BASE: UBM: CORRELATES WITH PATHOLOGY



TEST MOTILITY

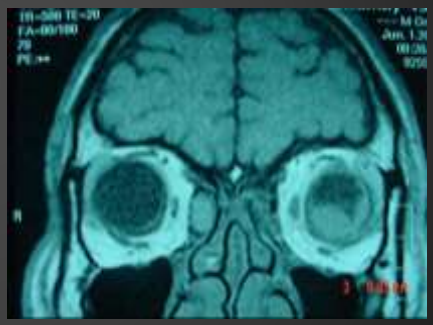






ASSESS EXTENT: CT/MRI

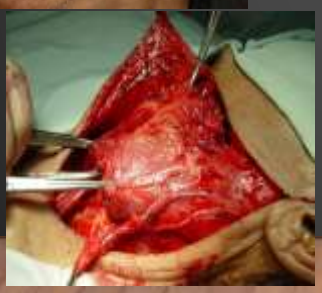
- Recurrent inferior fornix SCC:



CASE 5

- 68 YOM
- Epibulbar mass x 1 year

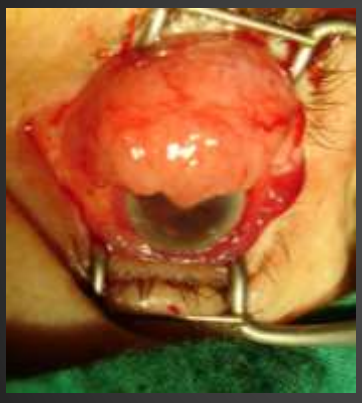
EXTENSIVE LESIONS

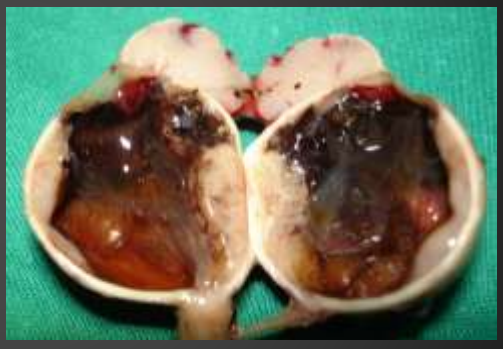


CILIARY BODY MELANOMA: THE TIP OF THE ICEBERG

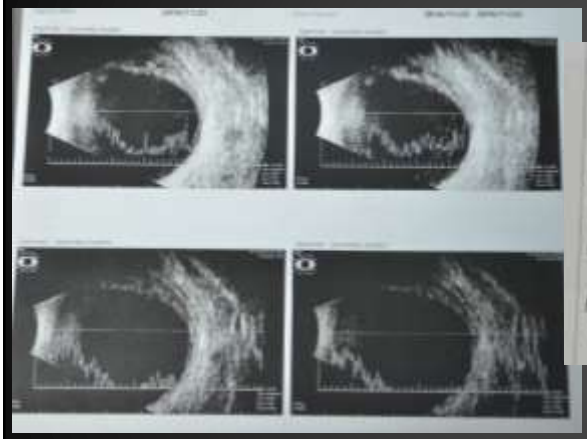
RING MELANOMA: ENUCLEATE

SAD STORY: CATARACT EXTRACTION





CASE 6 : 14 YOM, LOSS OF VISION OD



Ultrasound Report

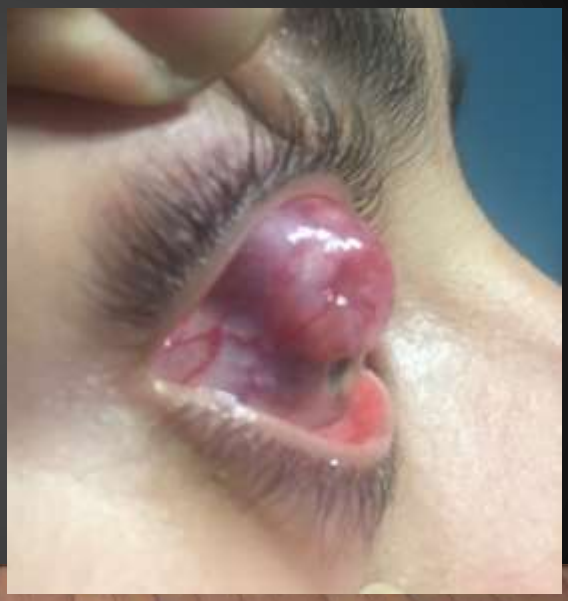
Date: 22-11-2016

A,B scan of Rt eye revealed somolucent vitreous cavity, highly echogenic thick membranous echo in the inferior globe, continuous with the retina at the optic disc (inferior RD).
Optic nerve and choroidal shadow are within normal

Impression
Rt inferior RD. (mostly Exudative RD)

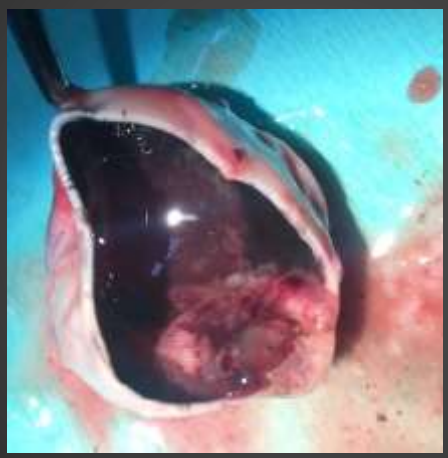
PPV

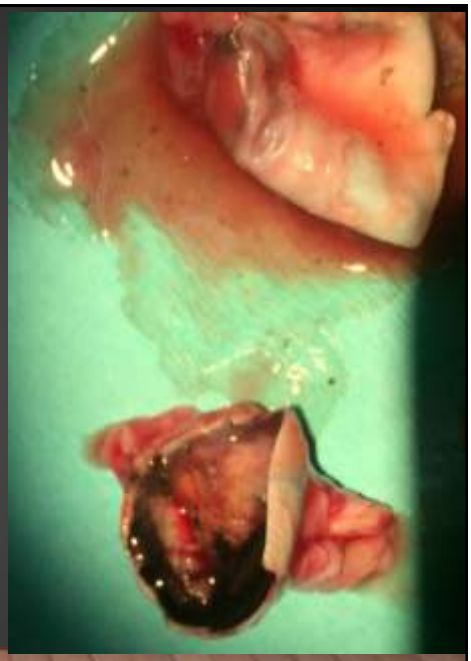
CASE 6: 14 YOM



AFTER 2 CYCLES OF CHEMO

Necrotic retinoblastoma
Massive choroidal invasion
EOE





Diagnosis :

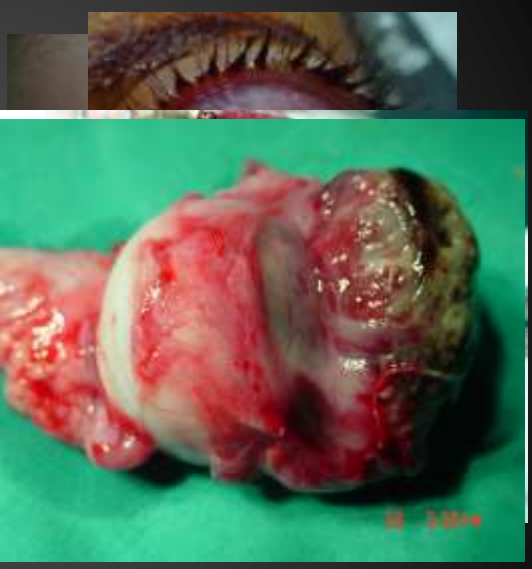
Epibulbar mass with peribulbar and intra-ocular infiltration, Enucleation,
RETINOBLASTOMA POORLY DIFFERENTIATED WITH SIGNIFICANT EXTRA-OCULA
EXTENSION, FREE SURGICAL AND OPTIC NERVE MARGINS, p T4.

11/1/2017

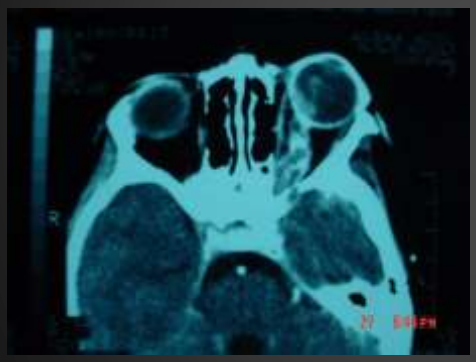
ANTERIOR SEGMENT SI
MISLEADERS:

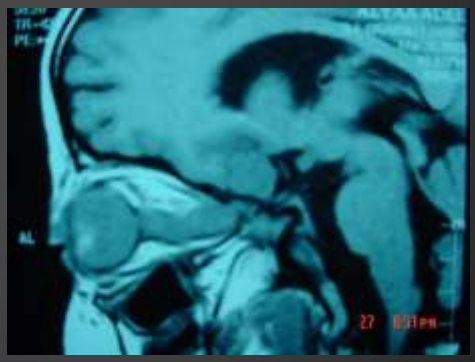
- Older age at presentation
- Flat retinal pattern
- Good visual acuity

- 6 YOF
- Cataract surgery 9 months ago
- Epibulbar mass
- Refusal of enucleation for 3 months



- Extensive endophytic retinoblastoma
- Massive optic nerve and extraocular extension
- Further management:
  - Chemotherapy x 9 cycles
  - EBRT
  - Intrathecal MX



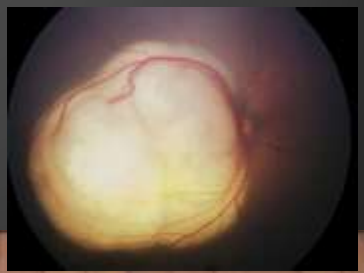


RETINOBLASTOMA

- Diagnosis:
  - History:
    - Leucocoria, Strabismus
    - Rule out familial cases
    - Differentiate a case of leucocoria

RETINOBLASTOMA

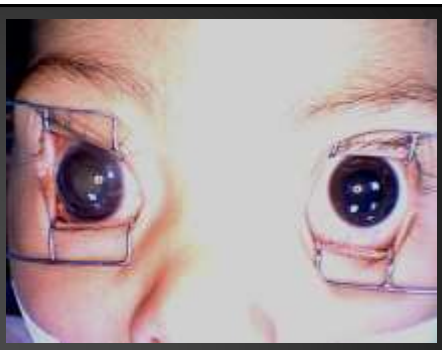
- Diagnosis:
- Clinical presentation
  - **Leukocoria: 90%**
  - **Strabismus: 35%**
  - **Golden Rule 1:**
    - **Any child with strabismus should have a dilated fundus examination**



RETINOBLASTOMA

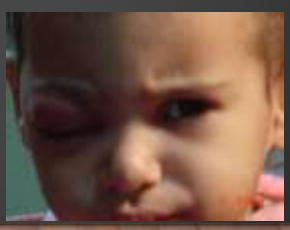
- **Fixed dilated pupil**
- **Neovascular glaucoma**
- **Heterochromia**

- **Hyphema:**
- **Golden Rule 2**
  - ***Spontaneous hyphema and unilateral buphthalmos in a child should be considered retinoblastoma until proven otherwise***



RETINOBLASTOMA

- **Pseudoinflammatory presentations:**
  - **Pseudohypopyon**
    - ***Golden rule 3:***
    - ***Any Childhood intraocular inflammation should be considered retinoblastoma until proven otherwise***
  - **Orbital cellulitis-like picture (tumor necrosis)**
    - **Golden Rule 4:**
      - **CT is a must in orbital cellulitis suspect. Look for intraocular mass**



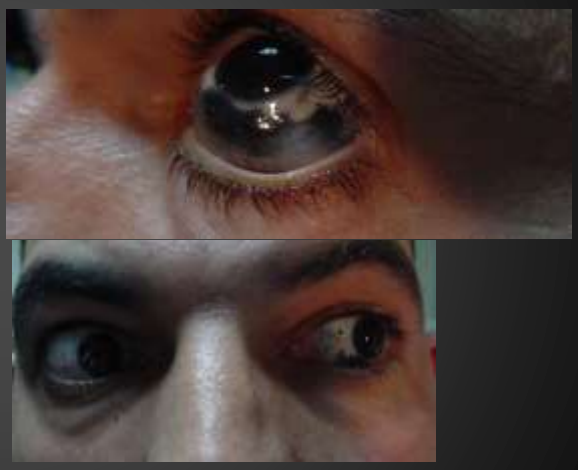
SYSTEMIC CHEMOTHERAPY

DOES NOT WORK ALONE !!!

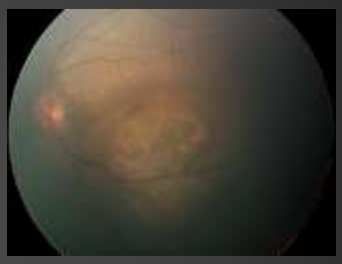
CASE 7: OCULODERMAL MELANOCYTOSIS (N OF OTA)

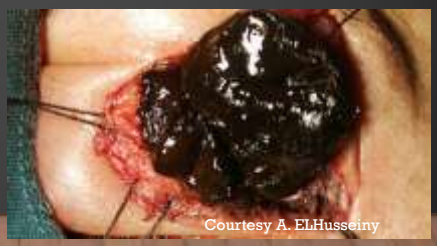
Benign pigmented lesion arising from dermal melanocytes

- Pathology:
  - Congenital periocular flat cutaneous pigmentation
  - Associated epibulbar and uveal pigmentation
- 45 YOM
- Nevus of Ota
- Recent diminution of vision OS



- Prognosis:
  - 0.4% develop uveal melanoma
  - Slightly more risk of brain and orbital melanoma
  - Eyelid, conjunctival melanoma are extremely rare



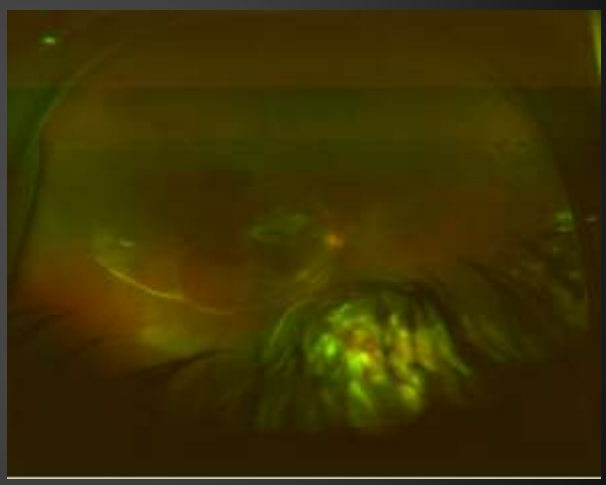


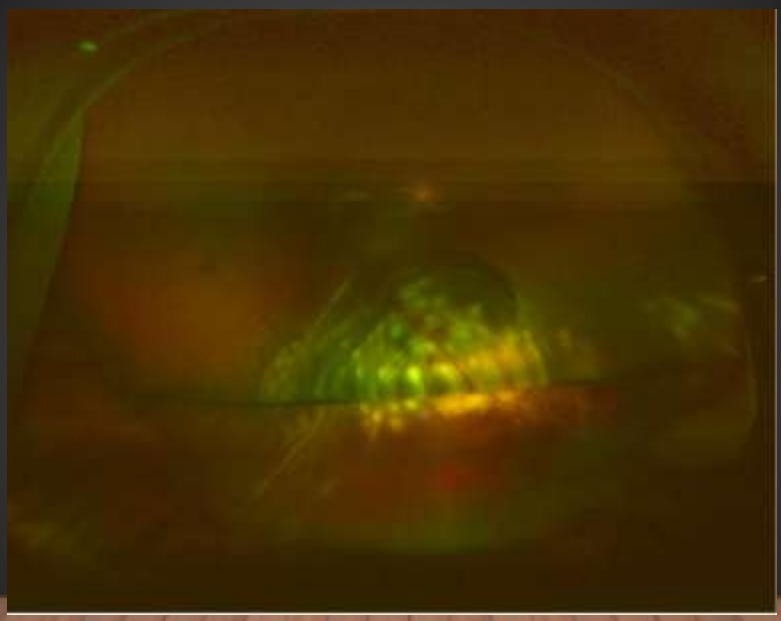
CASE 8: CAUGHT BY SURPRISE

- 28 YOM
- Dx: RRD
- Emergency PPV , SO, endolaser

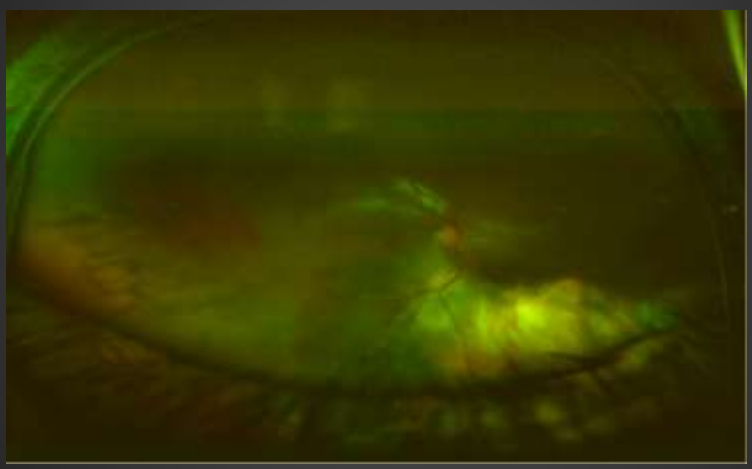
Do not :
- Drain Subretinal fluid
- Do laser
- Put silicone oil

Do:
- A simple vitrectomy and leave as it is





PARTIAL LAMELLAR RESECTION+ BRACHYTHERAPY: LOCAL CONTROL



DOM 12 months

CASE 9: 60 YOM, UVEAL MELANOMA; PLSU

ORBITAL VASCULAR LESIONS

- 6 to 12 % of all orbital neoplapsms
- Vascular hamartomatous lesions:
  - Cavernous hemangioma
  - Capillary hemangioma
  - Cavernous lymphangioma
- Orbital varix
- Hemangiopericytoma
- Angiosarcoma
- Intrvascular papillary endothelial hyperplasia
- A/v fistula
- vascular leiomyoma,
- angiolymphoid hyperplasia with eosinophilia
- Kimura disease
-

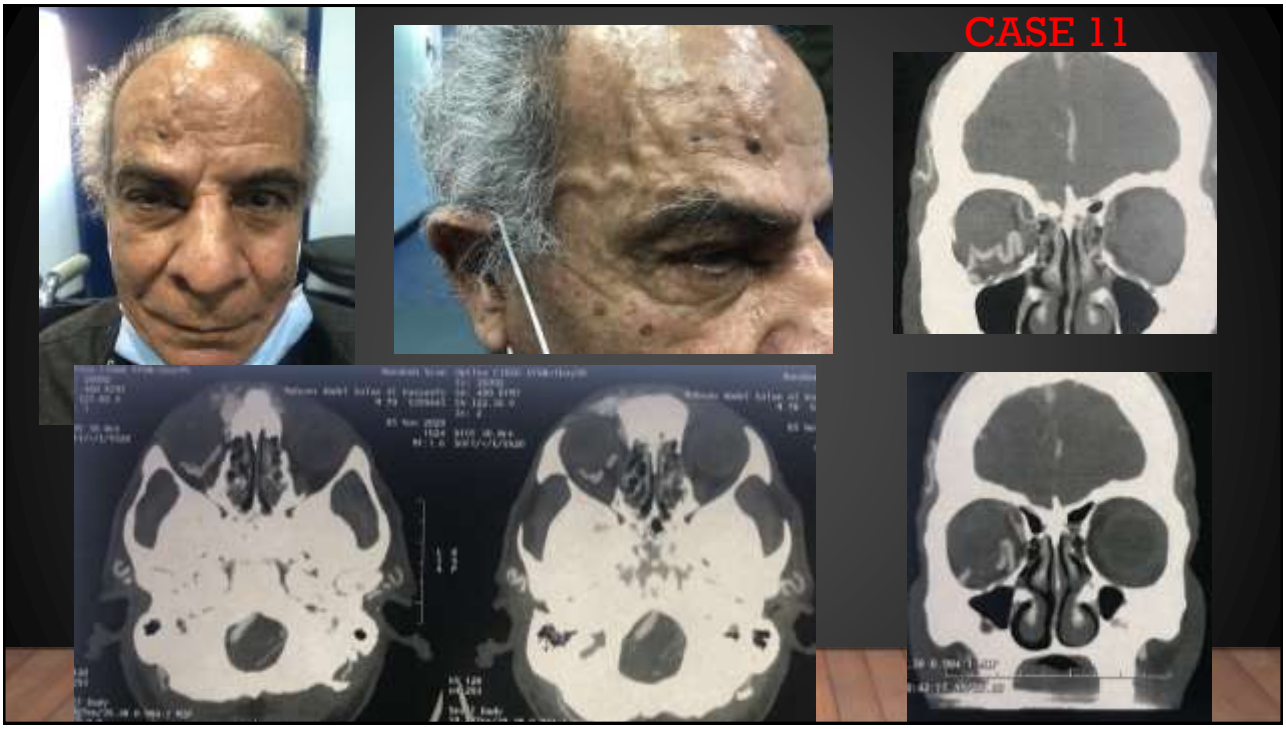
B BLOCKERS: PROPRANOLOL

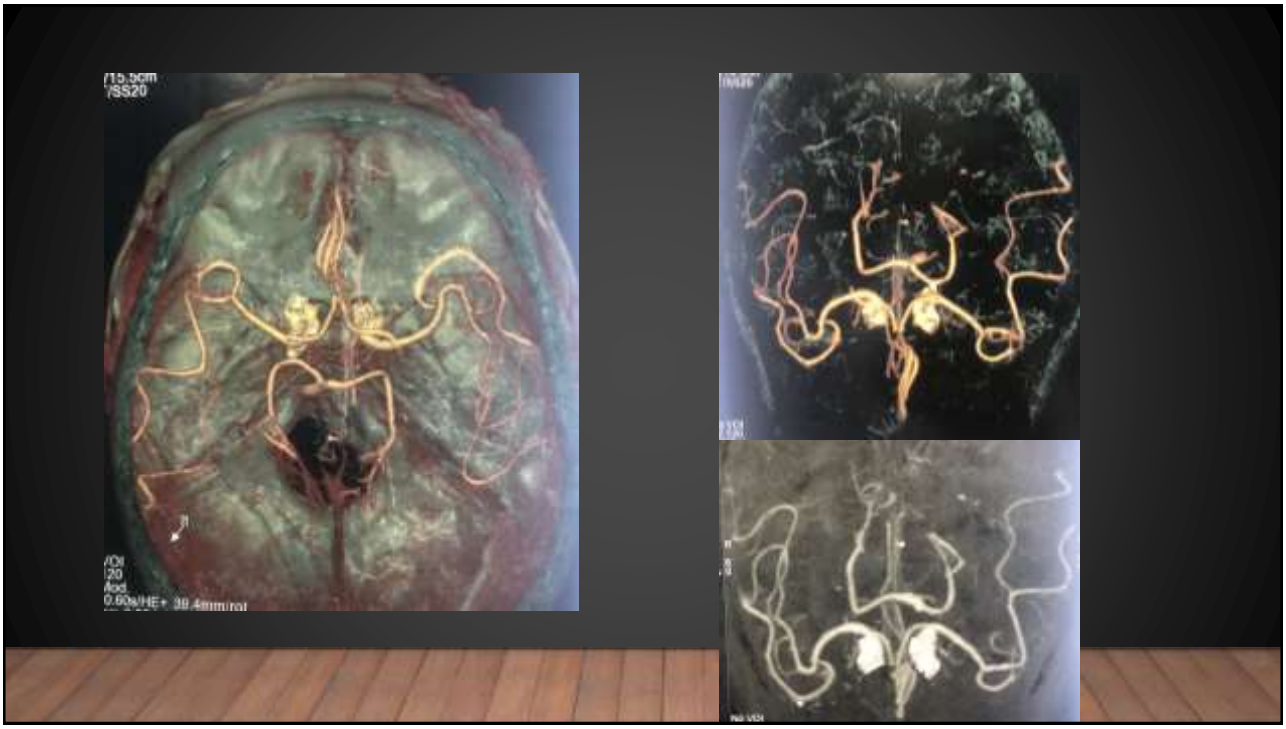
2 mk/kg x 4 months

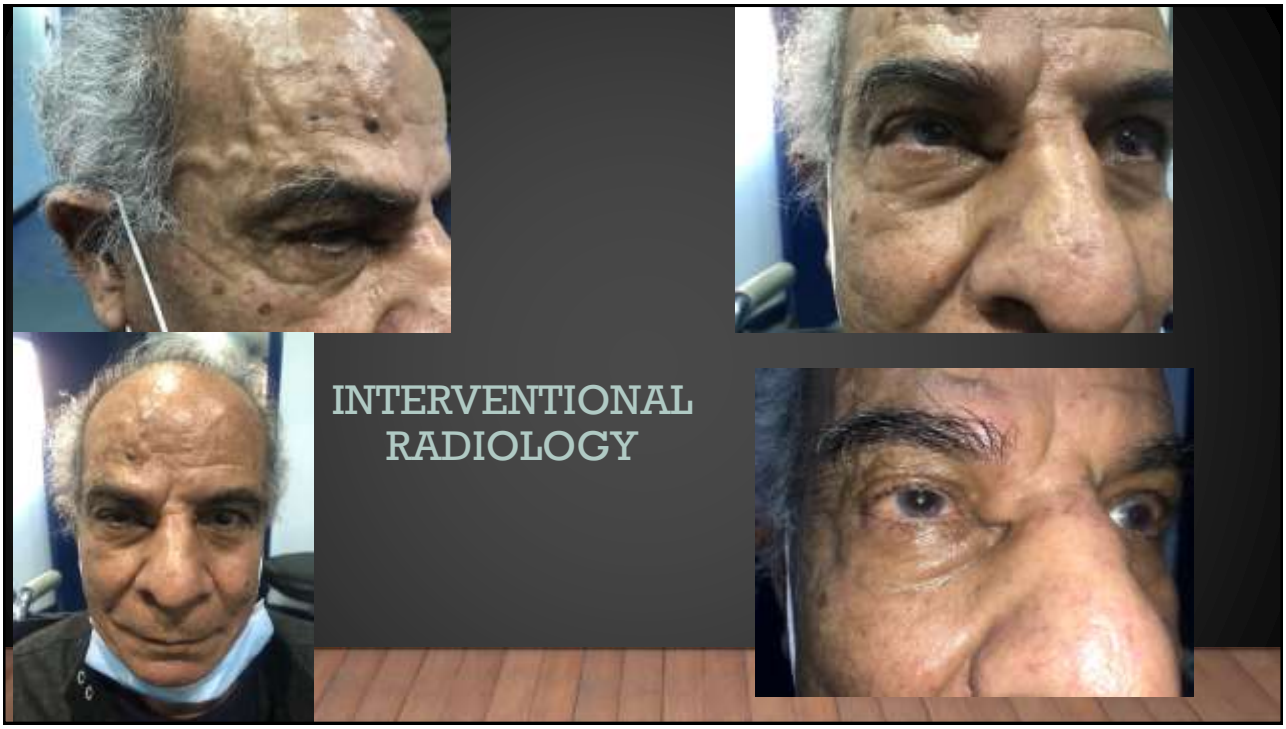
Courtesy Léauté-Labrèze, Bordeaux, France

CASE 10; 4 MONTH OLD BOY

- Early treatment is preferred
- Prolonged therapy may be necessary (3-4 months)

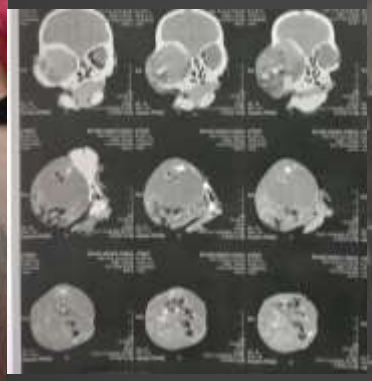

CASE 11

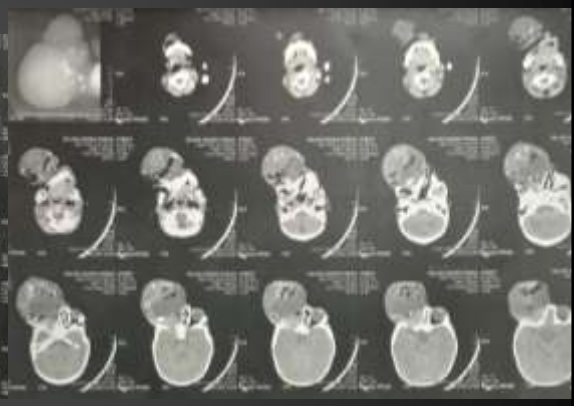




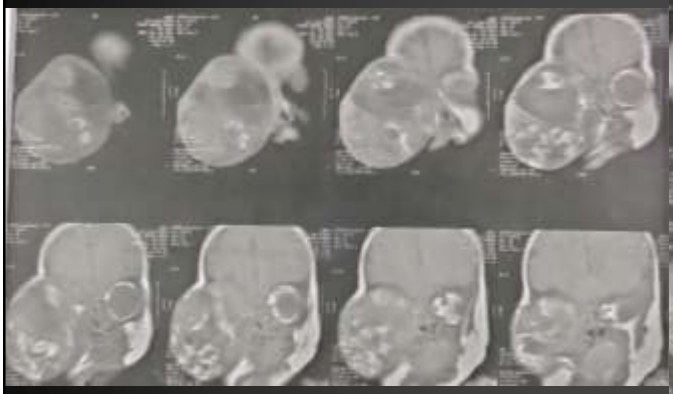
BORN WITH 2 HEADS

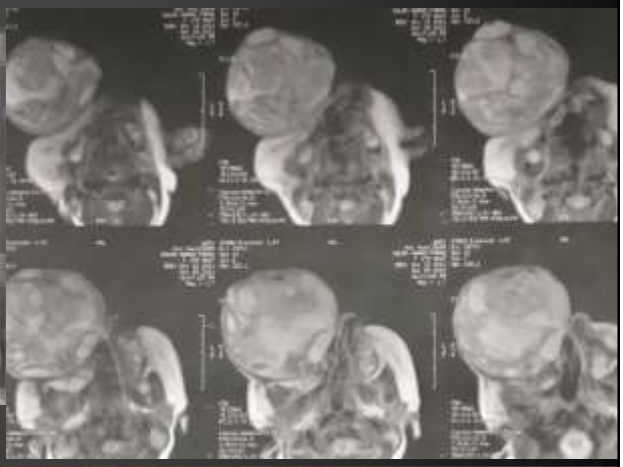
CASE 12: 16 DAY OLD FEMALE

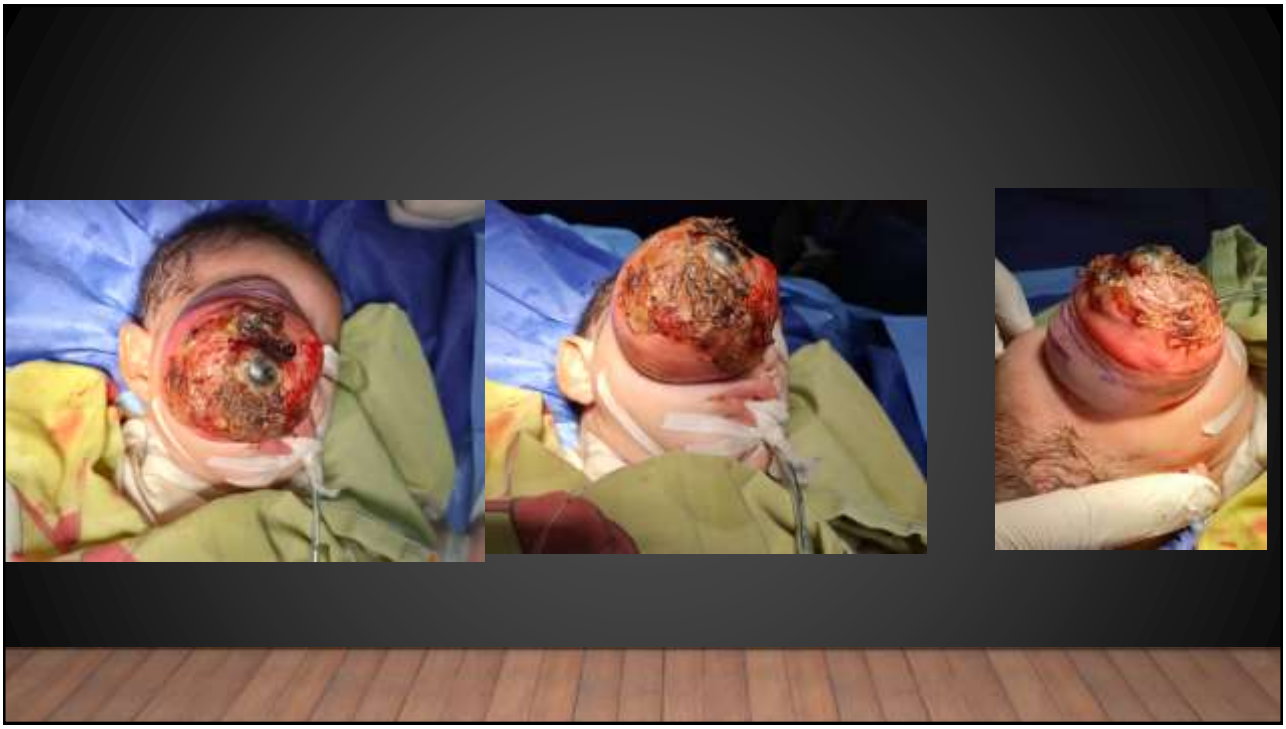


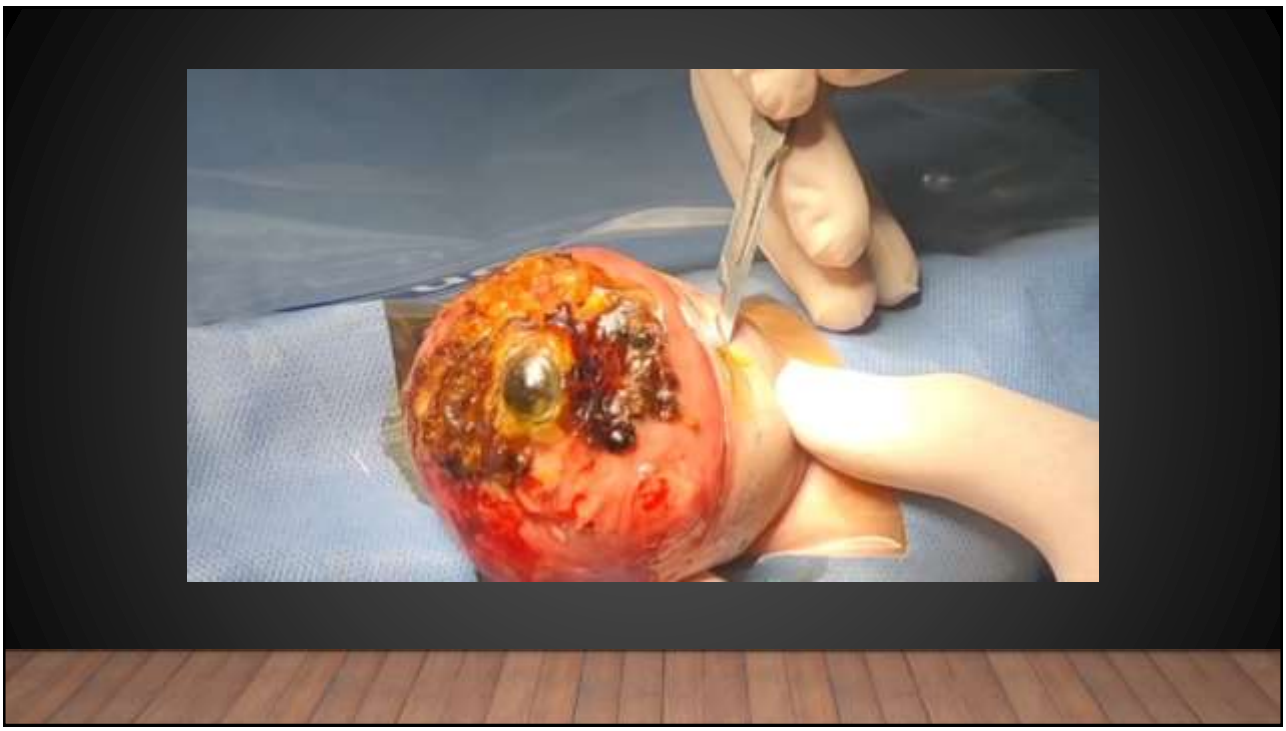


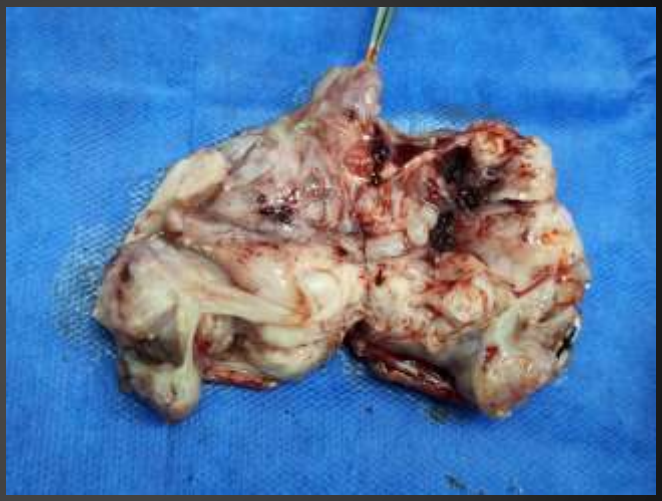
MRI











calcification were present.

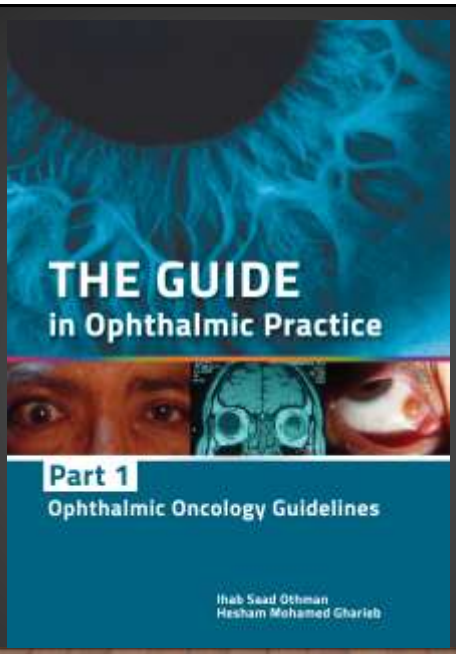
Microscopic :

Sections examined from the specimen received revealed squamous epithelium, respiratory epithelium, gut mucosa, smooth muscle bundles, lymphoid aggregates, skin adnexa, mature cartilage, mature bone, brown fat, nerve bundles, mature ganglia, adrenal tissue, glial tissue with foci of immature cartialge, immature nephroblastic and neuroepithelium in less than three low power fields
All surgical margins are free.

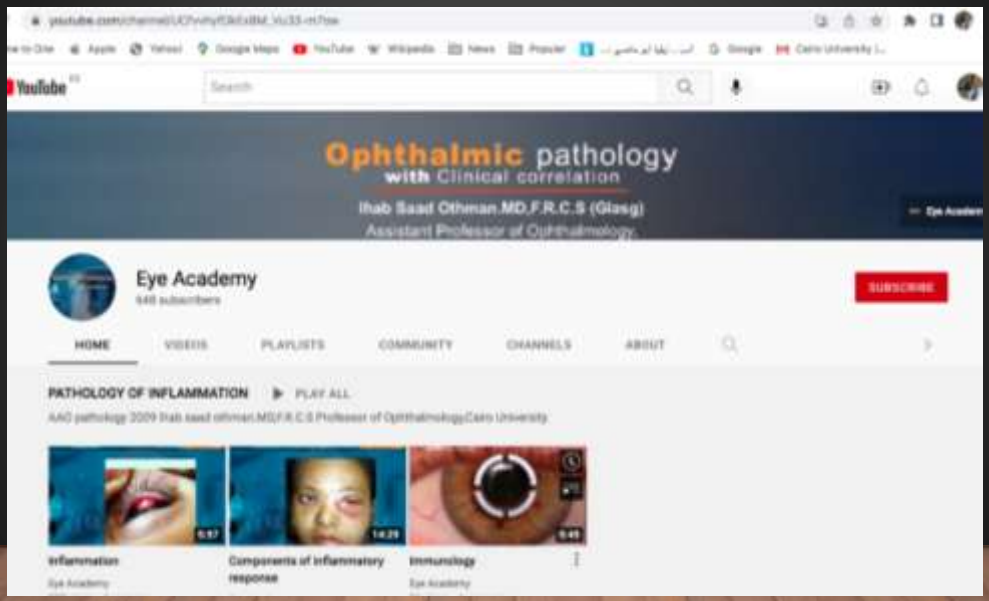
Diagnosis :

Right eye exantration, IMMATURE TERATOMA, GRADE II, ALL SURGICAL MARGINS ARE FREE.

Prof. Dr. Elia Anis Ishak



EYE ACADEMY



REMEMBER TO

LIVE IN STYLE

ihabsaad@hotmail.com