Orbital lesions in adults

Orbital pseudotumor is the most common.

1. neoplastic

a) discrete tumors that may occur adjacent to but not envelop the optic nerve sheath

● cavernous hemangioma: the most common benign primary intraorbital neoplasm.

Choroidal hemangioma is seen in Sturge-Weber syndrome.

● fibrohistiocytoma

● hemangiopericytoma

b) capillary hemangioma:produces infantile proptosis.Regresses spontaneously

c) lymphangioma: produces infantile proptosis. Does not regress

d) melanoma: the most common primary ocular malignancy of adulthood

e) retinoblastoma: congenital, malignant primary retinal tumor.40% are bilateral,90% are calcified (often a key differentiating feature; does not portend benignity as with other lesions). CT may show retinal detachment

f) lymphoma of the orbit: causes painless proptosis. The 3rd most common cause of proptosis

g) intraorbital meningioma

h) primary optic nerve tumors

● optic glioma

● optic nerve sheath tumor (schwannoma)

2. congenital

a) Coats disease: telangiectatic vascular malformation of the retina which leaks a lipid exudate causing retinal detachment. May mimic retinoblastoma. Vitreous is hyperintense on MRI on both T1WI and T2 weighted image due to lipid

b) persistent hyperplastic primary vitreous

c) retinopathy of prematurity (retrolental fibroplasia)

3. infectious

a) Toxocara endophthalmitis

4. inflammatory/collagen vascular disease: usually bilateral

a) scleritis

b) pseudotumor of the orbit: the most common intraconal lesion.Usually unilateral

c) sarcoidosis: usually affects the conjunctiva and lacrimal gland and spares connective tissues and intraorbital muscles

d) Sjögren'ssyndrome

5. vascular

a) enlargement of the superior orbital vein:may occur in thrombosis of cavernous sinus or incarotid-cavernous fistula

b) dural AVM

6. miscellaneous

a) drusen:degenerated retinal pigment cells in the posterior globe that may resemble calcified masses on CT

b) thyroid ophthalmopathy: Graves' disease (hyperthyroidism & swelling of EOMs → painless proptosis). 80% of cases are bilateral. The ophthalmopathy is independent of the level of thyroid hormone (possibly an autoimmune process). NB: a swollen inferior rectus muscle may resemble an orbital tumor if seen only on lower CT cut through the orbit

c) EOM enlargement can also occur with steroid use or occasionally with obesity

d) fibrous dysplasia