Diagnosis, Excision and Management of Subconjunctival Herniated Orbital Fat

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Case Report

- 84-year-old male presented for cataract consultation
- Type 2 DM, OSA, HTN, BMI= 32.88 (obese)
- Cataracts, protruding superotemporal bilateral masses
- Masses present for 20 years
- No change in size, ocularly asymptomatic
- Both patient and his wife dislike appearance
- Told in the past there was no treatment
Examination

- Convex, light-yellow, soft, mobile
- Well-demarcated anterior edge
- No posterior limit visible
- Overlying conjunctiva normal
- Fine superficial blood vessels
- Repositioned posteriorly with digital pressure
- Retropulsion of globe pushes masses anteriorly
CT Scan of Orbits

- Low-density areas compatible with fat
- Extended posteriorly between globe and recti muscles
- Continuity between intraconal and prolapsed fat
Subconjunctival Intraconal Orbital Fat Prolapse

- Rare and benign
- Usually asymptomatic
- Can have dryness or discomfort
- Can cause corneal dellen
- Cosmetic concern
- Obese men, 65 to 72 years of age
- Dihescence of Tenon’s capsule
- Etiology: older age, injury, surgery
Differential Diagnosis

- Extraconal orbital fat prolapse
- Lacrimal gland prolapse
- Dermolipoma
- Pleomorphic lipoma
- Atypical lipomatous tumor
- Conjunctival lymphoma
Extraconal Orbital Fat Prolapse

- Outside extraocular muscles
- Limited by orbital periostium and orbital septum
- Very common – Fat within eyelids
- Age 60 or older
- Normal aging, laxity orbital septum
Lacrimal Gland Prolapse

- Superotemporal location
- Fullness, usually have to evert lid
- Tissue is more dense – feels firm
- White or whitish-pink
Dermolipoma

- Congenital, females more common
- Average age of diagnosis – 22 ½ years
- Firm and fixed to the globe
- Unaffected by retropulsion
- Lateral canthus may be malformed
- Exhibits hairs on its surface
Lymphoid Tumors

- May be associated with systemic lymphoma
- Slightly elevated fleshy pink color
- Sliced salmon appearance
- Not mobile
Surgery

- Xylocaine 1% with epinephrine into mass
- Transconjunctival incision exposing fat
Surgery

- Hand-over-hand technique to advance fat
- Position hemostat (clamp) more posteriorly
- Excise fat, cauterize ends of individual lobules
Surgery

• No suture, conjunctival mucosal tissue is self-healing

• Other surgical techniques:
  - Remove fat, suture conjunctival flaps
  - Reposition fat, suture conjunctiva to sclera
  - Remove fat, suture fat to episclera
  - Reposition fat, fibrin glue conjunctiva to sclera
Histopathology

- Mature adipocytes separated by fibrovascular septae
- Within septae normochromatic fibroblastic cells
Histopathology

- Multinucleated floret-like giant cells
- Seen within or adjacent to fibrovascular septae
Histopathology

- Lockhern cells – adipocytes
- Display enlarged nuclei with intranuclear vacuoles
Histopathology

- Pleomorphic lipoma, atypical lipomatous neoplasms (ALN)
- Can undergo malignant transformation
- Pleomorphic lipoma – spindle cells, “wire-like” collagen
- ALN – enlarged hyperchromatic cells within fibrous septae
Six-months Post-Op