A New Complication of Prostaglandin-Associated Periorbitopathy

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Prostaglandin Analogues

- bimatoprost (Lumigan, Lattise)
- travoprost (Travatan Z)
- tafluprost (Zioptan)
- latanoprost (Xalatan)
- unoprostone (Rescula)
Prostaglandin Analogues
Side-Effects

1. Hyperemia
   a. self-limiting and reversible

2. Reddening of skin

3. Increased pigmentation

4. Iris pigmentation
   a. more common with latanaprost
   b. increased risk with hazel eyes
   c. increase in melanosomes

5. Prolongs inflammation
   a. can cause CME after intraocular surgery

6. Eyelash growth
Prostaglandin-Associated Periorbitopathy (PAP)

- Upper eyelid ptosis
- Worsening of levator function
- Deepening of the upper eyelid sulcus (DUES)
- Involution of dermatochalasis
- Orbital fat atrophy
- Enophthalmos
- Steatoblepharon – flattening of lower eyelid bags
- Inferior scleral show
Upper Eyelid Ptosis
Deepening of Upper Eyelid Sulcus and Orbital Fat Atrophy
Enophthalmos
Inferior Scleral Show
Etiology of PAP

- Affinity between prostaglandin drugs and peri-orbital fat cells
- Affects fat cell metabolism, causing them to shrink
- No evidence of inflammation on fat biopsies
- Inhibition of adipogenesis via FP-prostanoid receptor stimulation
- Upper ptosis/inferior scleral show: smooth muscle contraction due to reduction of collagen
Another Important Side-Effect of PAP

Tight Orbit Syndrome

- Narrow palpebral fissure
- Difficulty positioning eyelid speculum
- Difficult access for intraocular surgery
- Difficulty measuring IOP with GAT
- Difficulty in controlling IOP-eye drop placement
- Difficulty in doing gonioscopy, lens placement
- And one more new symptom/sign
Case Report

1. 81-year-old white female
   a. first diagnosed with ocular hypertension – December, 1997
      IOP: 26 RT, 26 LT
   b. first diagnosed with POAG in October, 2001
      started using Cosopt
   c. first started using bimatoprost (Lumigan) on September, 2002
   d. SLT: RT: December, 2004     LT: July, 2004
Case Report

2. Most recent exam June, 2015
   a. VA: 20/20 RT, 20/25 LT
   b. IOP: 19 RT, 19 LT
   c. 1-2+ NS cataracts
   d. C/D: RT .50, LT .60
   e. VF: RT overall depression, LT temporal depression
   f. deep-set eyes, small palpebral aperature
   g. 1st noticed “clicking” of eyelids July, 2013
   h. intermittent episodes of trichiasis, eyelid itching and eyelid dermatitis treated with FML ointment
Case Report
Treatment

- Discontinue prostaglandin
- Switch from bimatoprost to latanoprost
- Avoid unilateral therapy
- Use cotton swab to gently lift eyelashes and elevate when doing GAT