

Prostaglandin-associated periorbitopathy

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A 59-year-old gentleman with primary open-angle glaucoma was on topical bimatoprost 0.03% in the left eye since last 6 years. He presented with deepening of superior sulcus (arrow), periorbital fat atrophy, mild ptosis (a), and 2 mm of enophthalmos (b) in his left eye [Fig. 1], which are typically seen in prostaglandin-associated periorbitopathy (PAP). Comparison with old photographs taken before topical bimatoprost use showed the absence of any asymmetry between the eyes.



Figure 1: (a) Presence of left eye upper eyelid ptosis with deep superior sulcus (arrow) compared to right eye. (b) "Worm's hole view" (Nafziger method) showing left eye mild enophthalmos

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PAP, first reported in 2004, is caused by prolonged use of topical prostaglandin (PG) analogs.^[1] It has been reported with the use of bimatoprost, travoprost, tafluprost, and latanoprost.^[2-4] The classical features are as seen in our patient. PAP can appear as early as a month after the use of bimatoprost and is caused by fat atrophy, inhibition of adipocyte production, and differentiation of orbital fat due to PGF receptor stimulation by PG analogs.^[2,5] Complex effects of PG analogs on levator muscle and Muller's muscle along with orbital fat are postulated to be responsible for ptosis.^[2] PAP is reversed several months to years after discontinuation of the drug.^[1,2]

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Conflicts of interest

There are no conflicts of interest.

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