

Punctal eversion with silicone plug resulting in ocular surface trauma

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DESCRIPTION

A woman in her 70s with a history of chronic mixed mechanism ocular surface disease presented with an epithelial defect in her left eye. She was status post lower punctal cautery and was currently on Xiidra (lifitegrast ophthalmic solution, 5%) two times per day. On presentation, she endorsed foreign body sensation with 4/10 pain in her left eye. She was found to have a circular epithelial defect 1.5 mm in diameter ([figure 1](#)). Additionally, she had a vertically oriented, roughly linear area of conjunctival hyperaemia and chemosis nasally ([figure 1](#)). She endorsed her symptoms began to worsen approximately 1 month ago when she had undergone placement of an UltraPlug Silicone Plug (Angiotech, Vancouver, BC, Canada) in her left upper punctum.

In the setting of the pouting configuration of the upper punctum, the silicone plug, though well seated, caused direct contact of the plug to the ocular surface. With removal of the plug, the corneal epithelial defect and conjunctival inflammation resolved. Previous case reports describe granuloma formation¹ and canaliculitis² resulting from punctal plugs. Moreover, it is known that silicone punctal plugs can traumatise the ocular surface in the setting of partial extrusion of the plug, especially in the context of rigid plugs with thick collarettes.³ This case highlights the ocular surface trauma that may result when the plug's collarette is oriented



Figure 1 (A) Left eye slit lamp photograph demonstrating primarily a nasal conjunctival injection with prominent UltraPlug Silicone Plug (Angiotech, Vancouver, BC, Canada) well seated in a pouting punctum. (B) Slit lamp photograph of the same eye with fluorescein staining demonstrating an epithelial defect, with inset photograph showing punctal plug abrading cornea in the same position when patient adducts the eye. (C) Slit lamp photograph of the same eye demonstrating a linear conjunctival hyperaemia, with inset photograph demonstrating apposition of the plug to conjunctiva with vertical deviation of the eye.

Learning points

- ▶ Use of a punctal plug in the setting of punctal eversion may lead to ocular trauma.
- ▶ After punctal silicone plug placement, it is critical to observe final plug position.
- ▶ Silicone plugs with larger collarette or increased rigidity can lead to ocular surface damage.

towards the ocular surface. It further highlights the importance of evaluating the punctal position prior to and after plug placement, to ensure that no direct apposition of the plug to the ocular surface occurs. As evidenced by this case, significant ocular surface trauma can occur with a silicone plugged pouting punctum. It is likely that in all instances of punctal plugs with an external collarette, some degree of ocular surface trauma is incurred. This case highlights the importance of considering punctal configuration and final plug position when performing punctal occlusion.

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