International Journal of Ophthalmology and Optometry
www.ophthajournal.com
Online ISSN: 2664-8555, Print ISSN: 2664-8547
Received Date: 03-03-2019 Accepted Date: 04-04-2019; Published: 11-04-2019
Volume 1; Issue 1; 2019; Page No. 14-15

Supernumerary punctum in upper lid: Rare presentation

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Abstract
A 25- year –old female presented with an unusual opening in her right upper lid. She had no other complaints. On examination two lacrimal Puncta had seen in on right upper lid. One was normal in appearance and position, other was medial to this and slit like. Probe test had showed both Puncta present on same Canaliculus. Fluorescein dye disappearance test showed rapid clearance of dye. Patient had no other complaints so, no treatment had required. Instruct the patient for manual occlusion of puncta during topical drugs administration.

Keywords: supernumerary punctum, ectodermal cord, Eriophora.

1. Introduction
Tear enter into lacrimal puncta and passes through canalicular system, lacrimal sac and nasolacrimal duct to inferior meatus of nose. Obstruction or anomalies of this drainage system may change tear film dynamics. Congenital anomalies may occur in puncta like punctal agenesis, supernumerary punctum or double puncta.
Supernumerary punctum first describe by Mackenzie in 1854 [1]. The incidence of supernumerary puncta and canaliculi is about 1in 60,000 [2]. Most of them involve lower lid and occasionally upper lid. We report a case had supernumerary punctum in upper lid.

2. Materials and Methods
A 25- year- old female presented to us with an unusual opening in her upper lid, noticed by her husband. She had no other complaints like watering or discharge. No other family members have any congenital lacrimal anomaly. She had full time normal birth. There was no history of trauma or infection. General systemic examination was normal. Ocular examination had showed two lacrimal puncta present on right upper lid. (fig.1) They had well defined margin and there was no sign of inflammation, fibrosis or adhesion to surrounding tissue. One of these punctum is normal in appearance and position. The other one was 3 mm medial, close to medial canthus and it was slit like appearance.
Slit lamp microscopy had showed a normal appearing round (1.0 mm) lateral punctum and a slit shaped (1.0mm) medial one. The lacrimal probe is passed through lateral punctum. It come out from medial one and could advance to lacrimal sac. (Fig. 2) This showed medial one is accessory punctum situated on same canaliculus. On syringing it was observed that both puncta were communicated to lacrimal sac through common upper canaliculus. Passage was patent on syringing. Fluorescein dye disappearance test was performed and revealed more rapid clearance from right eye, compared to left. The lower puncta of right eye and both puncta of the left eye were normal. Tear film break up time, Schirmer's test and corneal sensations were normal in both the eyes.
As patient had no symptoms, so no further investigation or management was required. But instruct the patient about manual occlusion of the puncta in right eye when instill any eye drop or diagnostic pharmaceutical agents.

3. Discussion
The lacrimal drainage system transmits tears from the eye to the nasal cavity. The development of nasolacrimal drainage system begins with in the fold of surface ectoderm created between the adjacent margins of lateral process and the maxillary process of the first brachial arch during fifth week of gestation. The ectoderm in floor of groove form a solid cord or several solid cords that later fuse at six week of gestation. As the cells of cord proliferate the upper end widens to form lacrimal sac where as projection are sent towards medial canthus to form canaliculi and inferiorly to form the nasolacrimal duct. The canaliculi may develop from separate cords that eventually fuse with main cord. This solid cord hollow out through apoptotic vacuolization.[3] Supernumerary puncta possibly result from multiple epithelial buds from upper end of ectodermal cord. A number of congenital anomalies of lacrimal system occurs [4]. The supernumerary punctum may be an isolated occurrence or associated with other congenital anomalies [5]. It may have shared or separate canaliculi for each punctum. This can be confirmed by probe test, dacryocystography or dacryoscintigraphy. Accessory puncta are usually located medial to normal punctum and slit like appearance. Usually one accessory puncta have present but sometimes up to four have been reported [6]. These rarely function as usually do not have papillae and surrounding musculature. In our patient increased lacrimal drainage suggest that it may be functional. Faster tear drainage may lead to dry eye [7]. Epiphora usually due to associated lacrimal anomalies or secondary to reflux of tears through the accessory puncta. Dacryocystography and dacryoscintigraphy are indicated when patient have chronic

epiphora associated with supernumerary puncta. These were not indicated in our patient as patient is asymptomatic. The importance of this anomaly in our patient is that due to faster drainage may lead to rapid clearance of diagnostic & therapeutic agents from the eye. Manual occlusion of puncta during topical medication, increased the contact time of drugs to ocular surface.

Fig 1

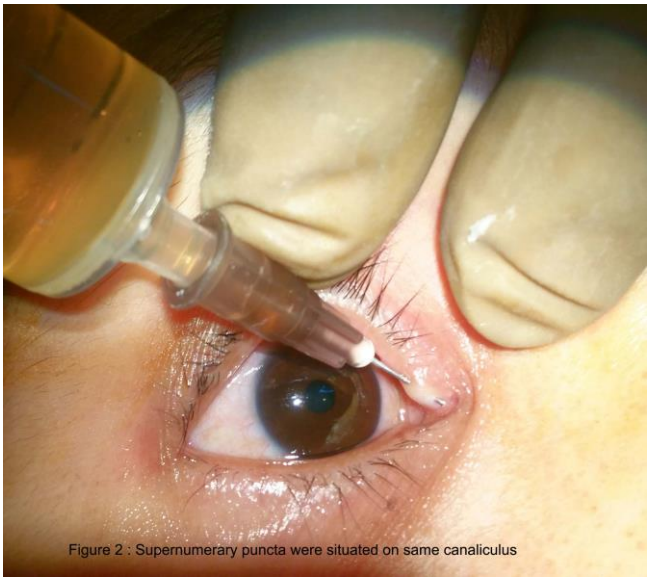

Fig 2

4. Conclusion

No surgical intervention is required unless patient is symptomatic. Educate the patient to when and where appropriate pressure applied to occlude the puncta when topical medications were used.

5. Acknowledgement: None

6. References

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