

## Novel Surgical Procedure for Punctal Stenosis: Advantages of Implementation in Pakistan

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*Dear Editor,* Punctal stenosis is the occlusion of the external opening of the lacrimal canaliculus. It is clinically diagnosed using fluorescein dye in addition to other methods. Over half of the population coming to ophthalmology centres for routine checkups are found to have punctal stenosis.<sup>1</sup> Research revealed that punctal stenosis could be caused by multiple factors such as using topical anti-glaucoma medications, ectropion and chronic blepharitis. The latter, in turn, has many unknown causes, with the clinical presentation being increased lacrimation, redness and discomfort of the eyes.<sup>2</sup> Moreover, advancing age increases the risk of punctal stenosis.<sup>3</sup>

The treatment of punctal stenosis can be carried out by various stenting procedures (including perforated punctal plugs), balloon dilatation and multiple punctal snip procedures differing based on the number of incisions (one snip, two snips, three snips and four snip punctoplasty<sup>4</sup> with each new procedure better than the previous one. A study published in 2018 presented a novel, modified rectangular three snips punctoplasty procedure involving three interrupted suture placements in the posterior wall of the ampulla, which decreased the chances of restenosis. The surgery showed improved subjective symptoms, with anatomical and functional success rates of 94% and 92%, respectively. It also showed a significant decrease in mean tear meniscus height (TMH) and recurrence rate in comparison with conventional three snip punctoplasty (TSP).<sup>5</sup>

The introduction of this surgery in Pakistan could be used as a panacea, given the country's current state. The high recurrence rate of punctal stenosis after the conventional TSP calls for a second surgery which not only alarmingly increases the odds of disruption of the normal anatomy and physiology of the lacrimal system but also causes prolongation of hospital stay, leading to increasing exhaustion for the patient. Moreover, a second surgery after the first jeopardizes the doctors' credibility as the patient expects complete recovery after the first surgery. There is an increased incidence of punctal stenosis due to

infection and inflammation in the rural areas of Pakistan, where more than half of the population resides, with few or no ophthalmology centres. People from these areas travel a long distance to resolve their ophthalmic issues. These setbacks slim the chances of seeking a second surgery in case of recurrence. Reluctance stemming from financial restrictions to seek a second surgery in case of recurrence can complicate the patient's condition by causing excessive lacrimation and hence a lot of discomforts. A first successful surgery can easily overcome these impediments with a lower recurrence rate. A much more efficient and improved treatment can be provided to patients with punctal stenosis through the three interrupted suture TSP. This procedure fulfils one of the key objectives of an efficient healthcare system i.e. the provision of quality healthcare with reduced exhaustion for individuals.

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### References

1. Comez AT, Karakilic AV, Yildiz A. Silicone perforated punctal plugs for the treatment of punctal stenosis. *Arq Bras Oftalmol* 2019;82:394-9. doi: 10.5935/0004-2749.20190077.
2. Nadeem N, Patel BC. Punctal Stenosis. In: *StatPearls*. StatPearls Publishing, Treasure Island (FL); 2022.
3. Bukhari A. Prevalence of punctal stenosis among ophthalmology patients. *Middle East Afr J Ophthalmol* 2009;16:85-7. doi: 10.4103/0974-9233.53867.
4. Soiberman U, Kakizaki H, Selva D, Leibovitch I. Punctal stenosis: definition, diagnosis, and treatment. *Clin Ophthalmol* 2012;6:1011-8. doi: 10.2147/OPHTH.S31904.
5. Park SJ, Noh JH, Park KB, Jang SY, Lee JW. A novel surgical technique for punctal stenosis: placement of three interrupted sutures after rectangular three-snip punctoplasty. *BMC Ophthalmol* 2018;18:70. doi: 10.1186/s12886-018-0733-2.

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