

## Commentary: Long-term outcomes and risk factors for failure of glaucoma filtering surgery in eyes with vernal keratoconjunctivitis and steroid induced glaucoma

Vernal keratoconjunctivitis (VKC), a common allergic ailment mainly affecting young boys is highly prevalent in India due to the tropical climatic conditions.<sup>[1]</sup> Mild manifestations of VKC are treated with anti-allergic medications; however, severe symptoms often require treatment with topical steroids. Severe VKC requires long-term treatment with topical steroids. Unregulated, chronic use of steroids can cause steroid-induced glaucoma (SIG) in about 2% of such eyes.<sup>[1]</sup> Most respond well by discontinuation of the steroids and addition of anti-glaucoma medications (AGM). However, 18 to 45% of cases still require

surgical intervention for intraocular pressure (IOP) control.<sup>[1]</sup> Filtration surgery is the most common method to manage the SIG in these young patients. However, several factors set these eyes apart and they may respond differently to the surgery.

The study by Senthil *et al.*<sup>[2]</sup> has evaluated these factors as well as the long-term outcomes of glaucoma filtering surgery in eyes with VKC and SIG. They found that the IOP reduction with trabeculectomy alone was equivalent to when it was combined with mitomycin C and or cataract extraction. They identified younger age, longer duration of VKC, longer duration of steroid use, larger cup disc ratio (CDR), and mixed type of steroid use to be associated with qualified failure of trabeculectomy. The pulse steroid therapy in the postoperative period did not seem to affect the success of trabeculectomy in this cohort.

Younger age has been identified as a risk factor for the failure of surgery as children have a more pronounced fibrotic response causing scarring and failure of filtering surgery.

Although antimetabolites are very effective in tackling this problem in adults, there were some reservations in using them in the pediatric population.<sup>[3]</sup> Giampani *et al.* in their retrospective study of 114 eyes in children reported that trabeculectomy with mitomycin C is an effective treatment for pediatric glaucoma. Bleb-related endophthalmitis is an associated risk but its frequency is the same as that seen in adults.<sup>[4]</sup>

Steroids are a double-edged sword, when used under supervision they are sight-saving; however, their unsupervised usage can lead to cataract and SIG, causing irreversible and permanent loss of vision. It is difficult to monitor IOP in children that can lead to missing SIG. However, a little cajoling, taking a little extra time, and checking the IOP in these children will help detect the condition early and prevent vision loss due to SIG. Once diagnosed, one in three patients requires surgery to control the IOP. The authors report good success of glaucoma surgery with and without trabeculectomy and even in combined cataract and glaucoma surgery in SIG, especially in patients at a higher risk of failure of glaucoma surgery in the presence of VKC.

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