

## Commentary: Reoperation following strabismus surgery among Medicare beneficiaries: Associations with geographic region, academic affiliation, surgeon volume, and adjustable suture technique - Operations again! What lessons do we gain?

Strabismus and amblyopia are among the most causes of ocular morbidity. A recently published study from our centre has shown the overall magnitude of strabismus to be 6.9% among the patients visiting the outpatient department.<sup>[1]</sup> Hence, strabismus surgery constitutes a sizeable number of the commonly performed ophthalmic surgeries. The most common causes of reoperations in strabismus include an overcorrection or an undercorrection.<sup>[2]</sup> The reoperation rate has been found to be 7.7% in children under 18 years.<sup>[3]</sup> Among adults undergoing strabismus surgery, the reoperation rate has been found to be 8.5%.<sup>[4]</sup> This may not be alarming in itself, but more interesting is the analysis of variation based on the geographic region, academic affiliation, surgeon volume, and use or non-use of adjustable suture technique.

In the current issue of IJO, Christensen *et al.*<sup>[5]</sup> have presented their study on the reoperations following strabismus surgery among Medicare beneficiaries. Further, they have also studied the association of reoperations with geographic region, academic affiliation, surgeon volume, and adjustable suture technique. They found higher reoperation rate in academic practices and high volume practices. The authors have rightly attributed this to the fact that an academic practice is likely to operate on more complicated cases. Apart from this, the surgeries may itself involve residents under training. A low volume centre, on the other hand, is less likely to perform complex cases, and furthermore, there are higher chances of referrals to the tertiary care centres for complex cases or at least resurgeries, whereas higher centres have to hold on to the complex cases and their complications as the “buck stops there!” This can lead to the difference in reoperation rates among these types of practices. A study controlling the types of surgeries performed would be more helpful in revealing the finer nuances. For nonophthalmic surgeries, the higher volume centres have been shown to have a better surgical success.<sup>[6,7]</sup>

The use of adjustable sutures has been found to be associated with lower rates of reoperations in horizontal strabismus surgeries.<sup>[4]</sup> Apart from this, the adjustable procedure is more likely to achieve the desired postoperative result.<sup>[8,9]</sup> This procedure can prove useful in challenging situations like complex strabismus. However, in the present study, the authors have not found the adjustable procedure to be significantly associated with lower reoperations after controlling for factors

such as practice type and region and surgical volume. The absence of such control in previous studies warrants more such studies into the subject under consideration. However, it could also be an artefact considering the type of study which is based on the Medicare beneficiaries and not a direct study of reoperations.

The authors have also found a difference in the reoperation rates among different geographical areas in the United States. This becomes more important in developing countries like ours where a large gap exists in healthcare access and training among different regions. The study population in the present study includes the Medicare beneficiaries in the American population. Hence, the study results cannot be extrapolated to a different healthcare setup. Similar studies undertaken in different healthcare settings may provide more useful information relevant to that particular setting.

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