Comments on: Intracorneal scleral patch supported cyanoacrylate application for corneal perforations secondary to rheumatoid arthritis

Dear Editor,

I read with interest the article by Sharma *et al*. on 'Intracorneal scleral patch supported cyanoacrylate application for corneal perforations secondary to rheumatoid arthritis'.[1] I would like to appreciate the authors for presenting a new technique of closing large sterile perforations with partial-thickness scleral grafts in eyes with rheumatoid arthritis. It is usually a difficult situation to seal a corneal melt or perforation in eyes with an autoimmune disease.

The authors mention the mean time for epithelization as 7.71 ± 1.14 weeks. It is not mentioned in the article as to how the epithelization was measured. Whether fluorescein staining of the cornea or an anterior segment optical coherence tomography of the cornea was performed to confirm the epithelization. This is all the more important to know as the intracorneal pockets where the scleral tissue was placed, were made at the deeper level into the corneal stroma.

The scleral stroma is normally avascular and receives its nutritional supply from choroidal blood vessels and from the vascular plexus in the tenon capsule and on the episcleral surface.[2,3]

Scleral ischemia, necrosis, and melt can happen after a chemical injury, thermal burns, and also after ocular surgeries such a pterygium excision with bare sclera technique.[4] Hence, a cover of conjunctival flap on the scleral graft is usually necessary to prevent its necrosis and melting, as the scleral graft does not contain epithelium and its survival is arduous on avascular surfaces.[5] The authors have used partial-thickness scleral patch grafts tucked into the corneal stroma to close the perforations in their cases.

In perforations that were close to the periphery, these scleral patch grafts would derive blood supply from the adjacent limbal vascular arcade. However in perforations that were central to the cornea, it is difficult to derive the same blood supply from the peripheral limbus. Contrary to this explanation, none of the eyes which had central corneal perforations had a scleral melt or necrosis in the postoperative

period. It would be interesting to note whether there were any deep vessels in the cornea near to the area of central perforation, which is normally seen in eyes with rheumatoid arthritis. If at all there were deep vessels, these vessels could provide the necessary blood supply to the scleral patch to survive.

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Conflicts of interest

There are no conflicts of interest.

Arjun Srirampur

Department of Cornea, Anand Eye Institute, Hyderabad, Telangana, India

Correspondence to: Dr. Arjun Srirampur, Consultant, Cornea, Cataract and Refractive Surgery, Anand Eye Institute, Habsiguda, Hyderabad - 500 007, Telangana, India. E-mail: sarjuneye@gmail.com

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