Reviewer's report

Title: Two cases of biodegradable collagen matrix (ologenTM) implant and conjunctival autograft for scleral necrosis after pterygium excision

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Reviewer: prabhakar krishnacharya

Reviewer's report:

Minor Essential Corrections

Reviewer's comments

For the article ‘Two cases of biodegradable collagen matrix (ologenTM) implant and conjunctival autograft for scleral necrosis after pterygium excision’

This research is about novel use of combined ologen collagen matrix and conjunctival autograft for management of extreme scleral ectasia following the use of mitomycin C for preventing recurrence in two cases of primary pterygium. Clinical course is evaluated for long term outcomes of the procedure following OCM and CAU grafting.

MMC induced scleral defects can be covered with autologous scleral grafts or by partial thickness scleral flap rotational procedures where in graft vs. host disease can be prevented. Authors should make it clear the disadvantages of using autologous scleral tissue use in these cases.

Abstract-following points should be included to improve complete understanding of research theme

1. MMC concentration and applications duration-mention
2. Weather OCM was trimmed or scleral ectatic margin is trimmed by biopsy punch-mention
3. What suture material used and how many stitches used to anchor the grafts
4. From where conjunctival autograft is prepared
5. Weather interrupted sutures used for both OCM and CAU
6. How the graft integrity was assessed during follow up-mention in detail
7. Loss of ocular pain, loss of inflammation-correction needed
8. Provide physical signs for good healthy ocular surface after grafting
9. Weather follow up done for one year or two –clarity required

Conclusion

1. What were the pre operative signs pointing towards MMC induced scleral melt-provide in detail
2. What were the clinical healing markers for maintaining ocular surface to recommend for its clinical use-required

Keywords: Mitomycin C should be used as a keyword in this section

Background-third paragraph

1. OCM application implant does not require donor tissue-what is the meaning
2. Long term follow up- one year or two years-clarification needed

Case 1

1. Was the patient normal 6 years previously without eye pain-clarify
2. Second Para-Fig 1 A shows conjunctivalization over exposed ciliary body or choroid- mostly it is ciliary body-clarify
   a) Advantages of diamond burr over other traditional trephines-mention
   b) Was there hemorrhage during debridement if so how haemostasis is attained
   c) Signs of healthy scleral bed-mention
   d) What were the dimensions of thinned out scleral bed and OCM implant
   e) From where the conjunctiva is harvested-measurements size and shape
   f) What is donor OCM-earlier mentioned donor tissue is not required-clarify
   g) How many interrupted sutures- looks like 12 in the picture
   h) Advantage of larger conjunctival graft?
   i) Figure 2D-OCM appears white after suturing to the scleral walls there is change in color-is it blood accumulation in the scleral bed
   j) Where was CAU anchored-to scleral walls or healthy conjunctival margins
   k) Post operatively what antibiotic and steroid used
   l) Fluromethalone eye drops used after one month, after removing sutures?
   m) Steroid ointment used for 5 days and between 5 days and one month was steroid therapy was not given-give reasons
   n) Step by step suture removal-clarify and give reasons
   o) Figure depiction is confusing-separate into preoperative figure, then procedural pictures and lastly pictures during follow up

Case 2

1. Figures and legends proper arrangement-needed

Conclusion

1. What is the advantage of CAU graft placed over the OCM implant-explain
2. Recommendations regarding RCT

Authors efficiently used OCM with CAU to maintained scleral integrity. OCM is
mainly used in glaucoma filtering surgeries to have porous and spongy healing bed through which aqueous could percolate. Tunica sclerosa is a tough walled structure-weather OCM provides sufficient integrity for sclera is questionable; nevertheless patients were free of irritative symptoms.

Include patients perspective view regarding OCM implant graft to complete this nice paper.

Lastly please mention limitations and strength of this research paper

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

No competing/conflicting interest-nil