



## SURGERY INDUCED NECROTISING SCLERITIS (SINS) AFTER CATARACT SURGERY

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### KEYWORDS :

#### INTRODUCTION

Surgery induced necrotizing scleritis is defined as scleral inflammation with necrosis occurring after ocular surgery. Scleral inflammation and necrosis are recognised as rare sequelae to ocular surgery with potentially devastating consequences to the eye.<sup>1-2</sup>

It commonly occurs at the site of incision following cataract surgery, strabismus surgery, trabeculectomy, retinal detachment surgery, pterygium surgery.<sup>3,5</sup> It has also been associated with collagen vascular disease<sup>3,4</sup>, excessive cauterization, post surgery infections<sup>5</sup> and use of specific suture material<sup>6</sup>. Few cases of SINS have been reported in literature. Here we present two cases of SINS following cataract surgery with a follow up of 18 months duration.

#### CASE REPORT

##### Case 1

A 53 year old male presented with complaints of pain and redness in right eye since 1 week. There was a history of cataract surgery in right eye (RE) 2 weeks ago. Best corrected visual acuity in RE was 6/18. Slit lamp examination revealed punched out conjunctival defect, with scleral thinning/ melt. The anterior chamber had AC cells 2+ / flare. Fundus examination was within normal limit. A battery of investigations were performed which showed

- Grams, KOH, AF stain : Negative
- Culture (BA and PDA) : Negative
- Total Count, Differential Count, ESR, Mantoux, TPHA : Normal
- RBS, Blood Urea, Serum Creatinine : Normal

After all investigations patient was started on medical treatment. On Day 1 patient was started on topical antibiotics and antifungals, systemic antibiotics and antifungals, topical cycloplegics and systemic NSAIDs. Subsequently on day 3 patient was started on intravenous steroids. As a surprise patient developed fibrinous reaction which settled with spiked up steroids. Due to scleral melt, patient was taken up for scleral patch grafting with debridement of necrotic sclera. Over the next 2 weeks, the scleral graft showed vascularization and was taken well.

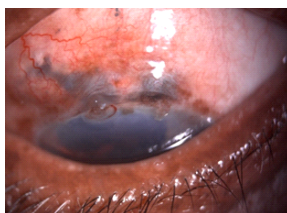


FIGURE 1: Pre op slit lamp picture of patient showing scleral thinning/melt.

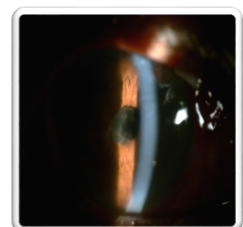


FIGURE 2- Scleral patch graft - RE Figure 3- Post operative Slit lamp photo-RE

##### Case 2

A 60 year old male presented with complaints of pain, redness in right eye since 1 week

There was history of cataract surgery in RE 3 weeks ago. Best corrected visual acuity in RE was 6/24. Slit lamp examination revealed conjunctival thinning with scleral bed necrosis. The anterior chamber had AC cells 1+. Fundus examination was within normal limit. A battery of investigations were done - which showed

- Grams, KOH, AF stain : Negative
- Culture (BA and PDA) : Negative
- Total Count, Differential Count, ESR, Mantoux, TPHA : Normal, ESR was raised 36 mm
- RBS, Blood urea, Serum Creatinine : Normal

After all investigations patient was started on medical treatment. On Day 1 patient was started on topical antibiotics and antifungals, systemic antibiotics and antifungals, topical Cycloplegics and systemic NSAIDs. Subsequently on day 2 patient was started on intravenous steroids. Post treatment inflammation reduced but scleral thinning was present. Anterior chamber was quiet and visual acuity was 6/12.

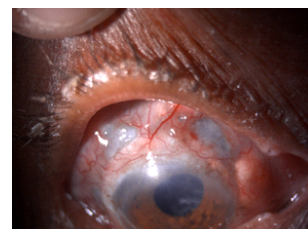
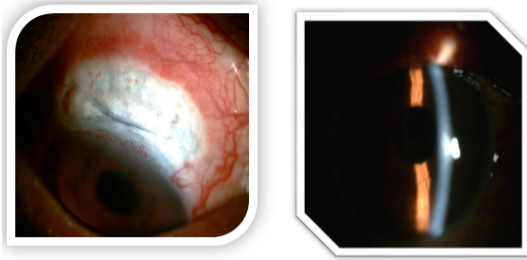


Figure 4: Pre treatment slit lamp picture of patient with conjunctival thinning and scleral necrosis.



**Figure 5 & 6: Post treatment slit lamp picture showing scleral thinning and reduction in inflammation and quiet anterior chamber**

#### DISCUSSION

SINS has been associated with surgical procedures, collagen vascular disease, excessive cautery, post-surgery infections. The etiopathogenesis has not been fully established. The history should be ascertained and a systemic and laboratory evaluation should be done to rule out any infectious pathology and collagen vascular disease. SINS is now a recognized devastating complication following ocular surgery. It should be included in the differential diagnosis of post-surgical inflammatory disease. Systemic steroids are the mainstay. Started with 1 mg/kg/day and adjusted as per the response. In severe cases, cyclophosphamide is the drug of choice 2 mg/kg/day in two divided doses. Systemic monitoring is mandatory. In cases with excess scleral thinning, scleral patch graft may be required.

#### CONCLUSION

Infectious scleritis can closely mimic SINS. Prompt workup to rule out infectious etiology in Indian scenario is mandatory before usage of steroids and immunosuppressives in SINS. Most of the cases can be managed with conservative approach but there is a big role of patch grafting in nonresolving cases with scleral melt.

#### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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#### Conflicts of interest

There are no conflicts of interest.

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