

Delayed-onset surgically induced necrotising scleritis (SINS) due to Gore-Tex oil retention sutures

Ian R. Reekie¹, Husain Shah¹, Kamaljit S. Balaggan¹

¹ - Wolverhampton and Midland Counties Eye Infirmary, Royal Wolverhampton NHS Trust, UK

Introduction

We report a case of delayed onset Surgically Induced Necrotising Scleritis (SINS) due to Gore-Tex oil retention sutures following globe rupture repair. We highlight the interval between surgery and scleritis onset, and the nature of the suture material in this case.

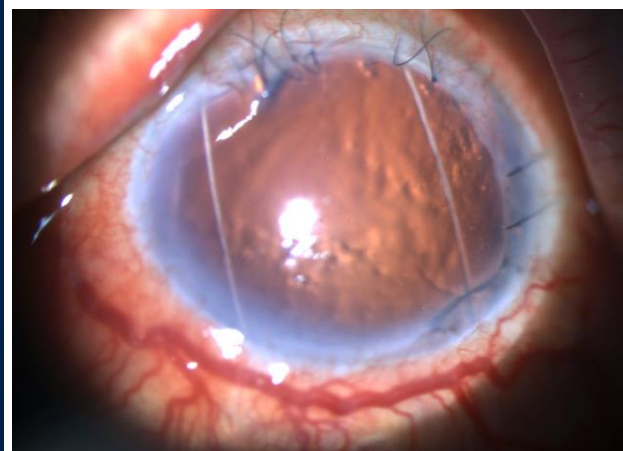
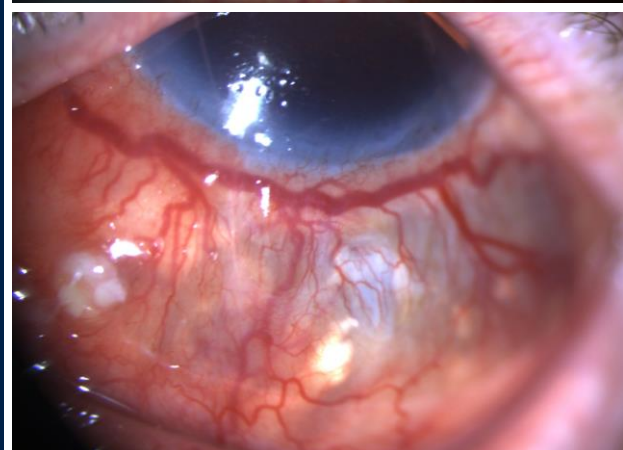


Figure 1:

Top – Photograph of the left eye following surgical repair of ruptured globe and silicone oil insertion. Note the Gore-Tex oil retention sutures in situ.



Bottom – Photograph of the left eye with inferior Surgically Induced Necrotising Scleritis. Note the injection of the globe and the scleromalacia which corresponded with the passes of the oil retention sutures.

Case

A 64-year-old woman presented with a globe rupture resulting in total hyphaema, aniridia, IOL expulsion, vitreous haemorrhage, funnel retinal detachment and NPL vision. She underwent tissue plasminogen activator pretreatment followed by AC washout, 23G-vitreotomy, 360-degree retinopexy, and 5000 silicone oil insertion. Gore-Tex oil retention sutures were required in view of the aniridia/aphakia. Five months later, she developed left eye pain and signs of SINS co-localising to the inferior suture passes. Topical and oral corticosteroids were insufficient to prevent scleromalacia and supplemental orbital floor and subconjunctival triamcinolone resulted in resolution of the scleritis.

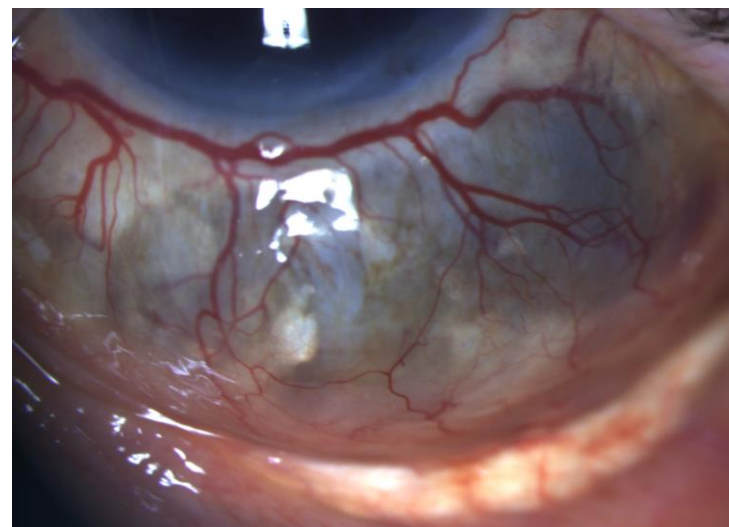


Figure 2:

Post triamcinolone injection photograph of the left eye. Note the resolving injection of the sclera, but the persistent scleromalacia. Note also the triamcinolone collection in the lower fornix.

Discussion

SINS is a recognised complication of ocular surgery, most often seen associated with anterior segment surgeries such as pterygium excision and cataract extraction. SINS associated with vitreoretinal operations has been linked to sclerostomy sites as well as with sutures for scleral closure.

Gore-Tex is composed of polytetrafluoroethylene and demonstrates high tensile strength. To our knowledge there have been no previous reports of SINS linked to Gore-Tex sutures. Polyglactin sutures, such as Vicryl have been previously implicated in causing SINS. Surgically induced scleritis has been reported at a wide range of timepoints post-operation, from days to decades.

In summary we report a case of SINS triggered by Gore-Tex sutures, a material not previously implicated in this surgical complication.

References

O'Donoghue, E., Lightman, S., Tuft, S. and Watson, P., 1992. Surgically induced necrotising sclerokeratitis (SINS)--precipitating factors and response to treatment. *British journal of ophthalmology*, 76(1), pp.17-21.
Ruiz-Lozano RE, Garza-Garza LA, Davila-Cavazos O, Foster CS, Rodriguez-Garcia A. The clinical and pathogenic spectrum of surgically-induced scleral necrosis: A review. *Surv Ophthalmol*. 2021 Jul-Aug;66(4):594-611.