Subconjunctival Granuloma after Manual Small Incision Cataract Surgery

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Summary

Presented herein, is an unusual case of a subconjunctival granuloma formation after an uneventful small incision cataract surgery. Subconjunctival nodules present unique challenges to the ophthalmologists in terms of establishing the correct diagnosis. Excision biopsy of the nodule resulted in complete resolution of symptoms. Histopathology of the mass revealed granulomatous inflammation, consistent with the diagnosis of a foreign body granuloma.

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A 45-year-old man presented with a complaint of a mass in the left eye for the past couple of weeks. He had associated foreign body sensation and watering. There was no discharge. He had undergone an uneventful, manual small incision cataract surgery (SICS) in that eye around two months back. The postoperative period was uneventful with a best corrected visual acuity of 6/6 at 6 weeks. On examination, a nodular, subconjunctival mass measuring 4x3x2 mm was observed near the insertion of the superior rectus muscle (Figure 1), along with associated erythema of the surrounding conjunctiva (Figure 2). The mass was non tender and free from overlying conjunctiva. A presumptive diagnosis of inclusion cyst was made and patient was advised excision biopsy of the mass. The mass was excised under local anesthesia. No cilia or suture was found at the site of the lesion. However, the mass was noted to be relatively firm and adherent to episcleral tissue during surgery. The overlying conjunctiva was preserved and sutured with vicryl 6-0 suture. Histopathology revealed a non-capsulated mass with extensive chronic granulomatous inflammation comprised of scattered foreign body giant cells, epitheloid cells, plasma cells and lymphocytes (Figure 3). There were scattered foreign material particles within the mass which exhibited birefringence under polarized light (Figure 4). Systemic examination and work-up, carried out by the physician to rule out any associated systemic disorder, did not reveal any abnormality. No recurrence was noted at the follow-up of one year.

Discussion

Reported herein, is a case of subconjunctival granuloma formation after manual SICS, a complication not previously reported in literature. Although the exact source of the particles causing granuloma formation could not be accurately determined, we speculate it to have originated either from retained suture fragments from the superior

Figure 1: *Photograph of left eye shows a suconjunctival mass in the vicinity of superior rectus muscle insertion.*

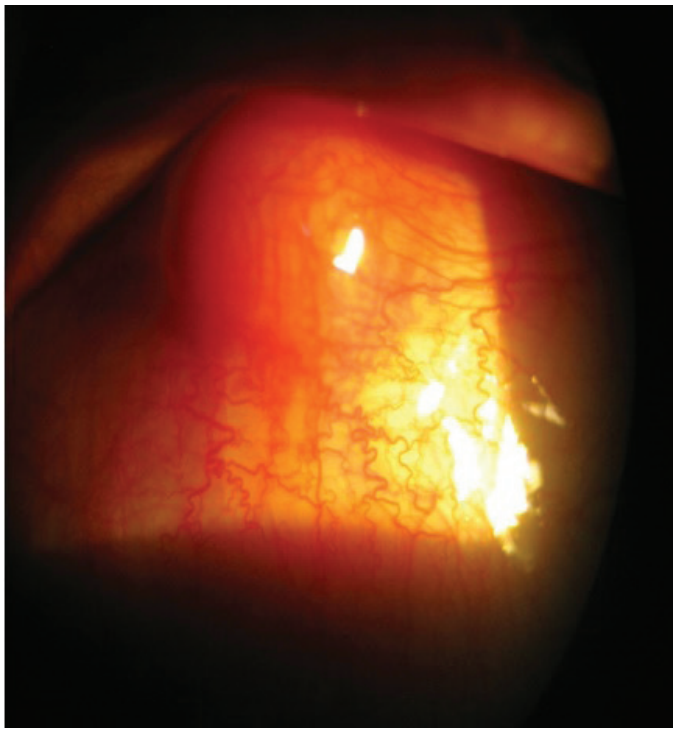

Figure 2: *Slit lamp picture shows an elevated, nodular lesion with congestion of overlying and surrounding conjunctiva.*

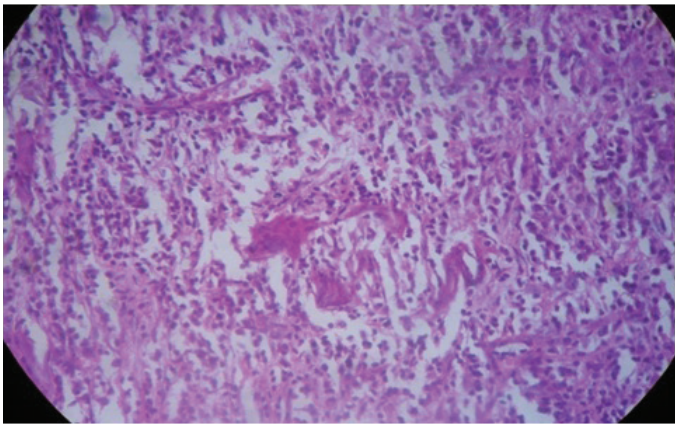

Figure 3: *Microphotograph shows foreign body type giant cells, macrophages and lymphocytes, suggestive of chronic granulomatous inflammation.*

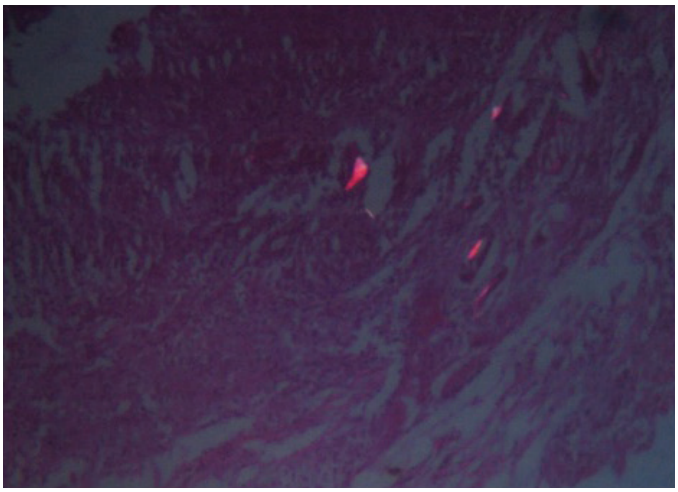

Figure 4: *Microphotograph under polarized light shows scattered foreign material particles which exhibit birefringence.*

rectus bridle suture or cotton fibers from swab sticks used during cataract surgery. Inadvertent retention of the superior rectus bridle suture particle has been previously reported, and it can present as chronic conjunctivitis.[1] Preoperatively, this mass was presumed to be an inclusion cyst, a known complication of SICS,[2,3] however, histopathology was not consistent with the presumptive diagnosis. It would be pertinent to mention here that subconjunctival granuloma should be distinguished from a relatively more common entity known as pyogenic granuloma, which can occur after any surgery that involves vascular tissue manipulation. Pyogenic granuloma, however, is a vascular mass composed of exuberant granulation tissue and is not a true granuloma; as it is neither pyogenic nor granulomatous in origin.[4]

Conclusion

A foreign body granuloma may present as a subconjunctival mass after manual SICS. Excision biopsy and histopathology help in establishing the diagnosis.

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