

# Conjunctival inclusion cyst, an uncommon complication of a common surgery: a case report and review of literature

## Abstract

Conjunctival inclusion cysts are benign cysts filled with serous fluid and slimy mucous secretions. They are congenital or acquired in origin. The acquired variety occurs following trauma or surgery. We report a case of conjunctival inclusion cyst following manual Small Incision Cataract Surgery (SICS) in a female aged 65years. The cyst originated at superior limbus, at the site of scleral tunnel construction which was used for SICS. The cyst was meticulously excised with no recurrence. To the best of our knowledge, this case report is one amongst the few reported in Indian literature. It highlights the factors responsible for conjunctival cyst formation and the methods to reduce its occurrence.

**Keywords:** conjunctival inclusion cyst

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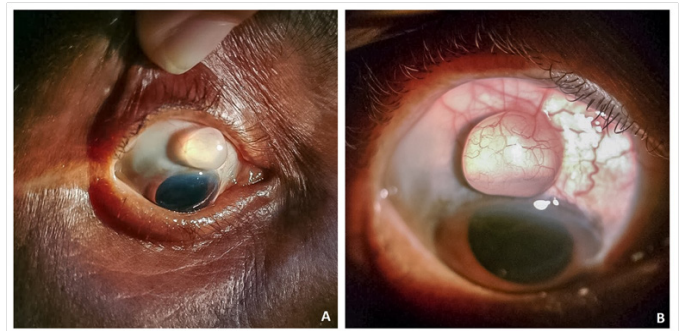
**Abbreviations:** SICS, small incision cataract surgery, suture less cataract surgery

## Introduction

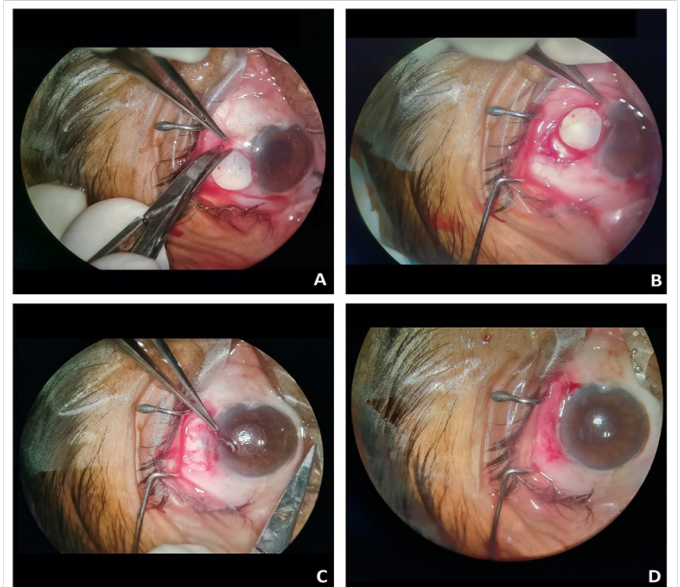
Conjunctival inclusion cysts are benign in nature and filled with serous fluid containing shed cells and slimy mucous secretions.<sup>1</sup> They can either be congenital or acquired in origin.<sup>2</sup> Acquired type occurs due to implantation of conjunctival epithelium. It has been reported following trauma and surgeries.<sup>3</sup> The incidence rate of unintended filtering bleb formation after cataract surgery is between 1% and 7.7%.<sup>4,5</sup> To the best of our knowledge, this case report is one the few reported in Indian literature emphasizing on the importance of factors responsible for formation conjunctival cyst after small incision cataract surgery (SICS) and its effects on vision, and the methods to decrease its incidence.

## Case report

A 65year-old female presented with the complaint of swelling in the right upper eyelid, cosmetic concerns and foreign body sensation for the past two months. It was painless and has gradually increased in size over a period of one year. She had undergone SICS with posterior chamber intraocular lens implantation (IOL) in the right eye two years back. On examination, her best-corrected visual acuity (BCVA) was 20/20 in both pseudophakic eyes. Slit lamp examination of the right eye showed the presence of a solitary spherical cystic swelling at the superior limbus, overlying the previous scleral tunnel incision, measuring 6mm in diameter containing clear fluid and the left eye examination was unremarkable. The anterior and posterior segment examination was unremarkable with normal intraocular pressure (IOP) and gonioscopy. She underwent surgical excision of the cyst under local anesthesia. Peroperatively, the conjunctiva around the cyst was meticulously separated by blunt dissection. While excising the cyst from the base, it ruptured with the release of clear fluid. The scleral tunnel was found to be completely sealed and the anterior chamber was maintained. The conjunctiva was then closed using 8-0 polyglactin sutures. Postoperatively, she was started on an antibiotic and steroid eye drop for 1month. She is under regular follow up since then without any recurrence and her vision is maintained at 20/20.



**Figure 1** (A) Photograph of the patient showing conjunctival inclusion cyst at the superior limbal region. (B) Slit lamp photograph showing conjunctival inclusion cyst with blood vessels over it and presence of serous fluid inside it.



**Figure 2** Photographs showing steps of the surgery. (A) Incision around the conjunctival cyst. (B) Meticulous blunt dissection to expose the cyst. (C) Examining the integrity of the scleral wound. (D) Closure of conjunctiva.

## Discussion

Conjunctival inclusion cysts can be congenital or acquired in nature. Acquired conjunctival inclusion cysts occur following trauma or surgery like SICS,<sup>2-5</sup> phacoemulsification,<sup>6</sup> strabismus surgery,<sup>7</sup> pars plana vitrectomy,<sup>8</sup> scleral buckling,<sup>9</sup> Ahmed glaucoma valve surgery<sup>10</sup> and ptosis surgery.<sup>11</sup> They are most commonly seen following strabismus surgery.<sup>7</sup>

The probable cause of formation of conjunctival cyst following SICS could be implantation of the conjunctival tissue in the tunnel wound or due to dragging of conjunctiva along with IOL during IOL implantation.<sup>2</sup> These patients are usually asymptomatic but they may occasionally present with complaints of a gradual increase in the size of the cyst, cosmetic concerns, and foreign body sensation.<sup>12</sup>

One of the most important differential diagnosis is a filtering bleb. In glaucoma surgery, a filtering bleb is intentionally created to allow for the passage of aqueous humor into the sub-conjunctival space so as to control the IOP. It might be formed unintentionally following SICS. Jain et al.,<sup>13</sup> observed on gonioscopy the fish mouthing of the internal opening in a cataract surgery case with unplanned filtering bleb formation.<sup>13</sup> The possible complications of these postoperative conjunctival cysts could be endophthalmitis, hypotonic maculopathy, and epithelial in growth through the tunnel wound.<sup>3</sup> These cysts may spontaneously disappear; however, in persistent cases, surgical management is required. Surgical excision of the cyst is the best treatment.<sup>2</sup>

## Conclusion

Thus, to conclude this case report emphasizes on the fact that this complication of conjunctival cyst formation following SICS can be avoided by meticulous reflection of the conjunctiva before scleral wound construction and by avoiding the IOL contact with the conjunctiva during IOL implantation.

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## Conflict of interest

Authors declare that there is no conflict of interest.

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