An uncommon complication of cataract surgery  
Une complication inattendue de la chirurgie de cataracte

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Abstract:
Peripheral ulcerative keratitis is an unusual complication of cataract surgery. The case of a 60-year-old patient with peripheral ulcerative keratitis occurring one week after cataract surgery is presented. Investigations showed active rheumatoid arthritis. After treatment, follow-up examinations showed good results. This case report aims to describe the importance of checking the medical history of a patient undergoing cataract surgery.

Keywords : Cataract extraction, complication, ulcerative keratitis.

Introduction
Cataract still remains the leading cause of blindness in emerging countries. With the development of surgical technology, cataract surgery has become a safety surgery with rapid recovery and minimal complications.[1] In addition, for most ophthalmologists, it’s become a routine procedure.

Case report
A 60-year-old patient consulted our department for a blurred vision in the left eye. He did not report anything wrong with his medical history. A full ophthalmological examination was carried out and a cortico-nuclear cataract was diagnosed in the left eye.

Successful phacoemulsification was performed. Non-steroidal anti-inflammatory (NSAIDs) eye drops (diclofenac) and topical Antibiotic-steroid (tobramycin/dexamethasone) were prescribed.

One week after the surgery, the patient complained of moderate pain and photophobia. The corrected distance visual acuity was 08/10, the slit lamp examination showed peripheral ulceration concentric to the limbus with an overhanging edge at its central border in the inferotemporal quadrant (Figure 1) and bilateral keratoconjunctivitis sicca (Figure 2).

Figure 1: Slit-lamp biomicroscopy: Peripheral ulcer with no scleritis or anterior chamber inflammation.
without inflammation in the anterior chamber, and the fundus examination was normal. The anterior segment swept-source OCT showed a stromal thinning (Figure 3).

The onset of peripheral ulcerative keratitis was unexpected. Etiological investigations pushed us to return to the basics and check carefully medical history that reveals polyarthritis of peripheral joints and the patient was self-medicated with anti-inflammatory drugs. After, physical examination, radiological investigations, and rheumatologist examination, active rheumatoid arthritis was diagnosed.

We immediately stopped the topical non-steroidal anti-inflammatory treatment. Topical steroids, preservative-free artificial tears, systemic corticosteroids, and methotrexate were prescribed.

The evolution was characterized by complete healing of the epithelial defect with residual corneal opacities after 2 months (Figure 4). The AS-OCT showed an improvement of the stromal thinning (Figure 5).
Discussion

Peripheral ulcerative keratitis is a destructive inflammatory disease of the juxtalimbal corneal stroma. [2] It could be associated with various ocular and systemic diseases including RA. [3] Destructive inflammatory cells accumulate in the margin of the cornea leading to epithelial defect and stromal degradation. Pathophysiology of PUK associated with this chronic inflammatory and auto-immune disease has not been elucidated, research suggests that both T cells and antibodies related to RA are involved in the disease. [3]

The occurrence of sterile corneal ulceration related to cataract surgery has been reported in few cases of patients who suffer from RA. [4] Jones.R and Maguire.L reported a low rate (<8%) of corneal complications in patients with RA; they also found that most patients who developed this complication had keratoconjunctivitis sicca. [5] This corneal complication usually occurs from 1 to 24 weeks after surgery. [5] [6]

Several mechanisms of PUK induced by cataract surgery have been proposed such as local factors (sicca, neurogenic innervation, ischemia..) [4] and iatrogenic factors (non-steroidal anti-inflammatory eye drops, suture material, intraocular lens..). [4] [7]

Topical non-steroidal anti-inflammatory drugs are used in the management of postoperative ocular inflammation and have been associated with corneal melt, evidence proving this association has not yet been established. But, several cases have been reported. [8] [9] The role of overexpression of matrix metalloproteinase in corneal perforation caused by topical non-steroidal anti-inflammatory drugs has been suggested. [10]

Overall, the factors responsible for causing PUK after cataract surgery may include topical non-steroidal anti-inflammatory use, sicca syndrome, systemic diseases, and/or any combination of all those factors. In our case, we did not pay attention to medical history and general examination. Perioperative immunosuppression, and careful use of topical non-steroidal anti-inflammatory with earlier postoperative follow-up could have helped to avoid PUK developing.

Conclusion

Corneal complications can occur after cataract surgery. It’s a serious complication, physicians should recognize it. In addition, they have to pay attention to medical history, general check-up and to do a detailed eye examination before any surgery.

References


CONFLICTS OF INTEREST:
The authors declare that they have no interest in this article.