

Case Report

Anterior Uveitis after Subconjunctival Injection of Mitomycin C in a Patient with Previous Trabeculectomy

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Abstract

Objective: To report a case of anterior uveitis after subconjunctival mitomycin C injection in a patient with a history of trabeculectomy.

Case Report: A 45 year old patient, with anterior uveitis in his right eye after postoperative injection of mitomycin C one month after trabeculectomy, was treated in Basir eye clinic, Tehran, Iran. The Patient had no history of previous ocular infection. Topical prednisolone and tropicamide drops were effective in improving vision and reducing pain in our case.

Conclusion: Anterior uveitis might happen after trabeculectomy surgery; however, in our case, it was more likely the result of mitomycin C administration one month after trabeculectomy. This should be considered as a differential diagnosis of postoperative bleb infections.

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Introduction

Mitomycin C (MMC) is an antibiotic, anticancer drug with widespread applications in ophthalmologic surgeries¹. The use of MMC in glaucoma surgeries prevents additional fibrosis or vascular ingrowth¹. Although episodes of uveitis after trabeculectomy surgery with/without mitomycin C application have been described previously², our case developed uveitis after outpatient administration of mitomycin C one month postoperatively. This case report was approved by the ethics committee of Basir Eye Health Research Center, Tehran, Iran, and written consent was obtained from the patient before reporting the case.

Case report

Here we report a 45-years-old male patient, with cystic encapsulated bleb in his right eye observed in his routine post-surgical checkup one month after trabeculectomy. The patient was Phakic without any previous history of systemic inflammatory diseases. The patient had normal findings in day 1, 3, 7 and 14 postoperative follow-ups with no sign of inflammation and was under treatment with betamethasone eye drop twice a day. In the last postoperative visit one month after surgery the patient had visual acuity of 0.8 (0.0969 LogMAR) and intraocular pressure (IOP) of 21 in the right eye. In slit lamp examination, a cystic encapsulated bleb was observed. We decided to use needling to treat the cystic encapsulated bleb. Patient underwent topical anesthesia with tetracaine hydrochloride 0.5 %. Needling was performed with a 27-gauge needle after instillation of 5 % povidone-iodine in fornices to break down the encapsulation and was continued with subsequent subconjunctival injection of MMC (0.1 cc 0.02 %). Three days after MMC injection, the patient came

back with severe pain and visual acuity of 0.1 lines (1 LogMAR) in his right eye. The patient indicated that the pain had started just six hours after MMC injection. In physical examination, diffuse conjunctival injection without prominent bleb involvement, posterior synechiae, anterior chamber cell and flare with clear vitreous were observed (Figure 1). Due to several observations we decided to treat our patient with a diagnosis of anterior uveitis due to MMC injection and ruled out the possibility of infectious blebitis. Our reasons for this diagnosis were the presence of diffuse conjunctival injection without prominent bleb involvement, lack of typical white on red view indicative of blebitis, and initiation of patients symptoms just six hours after MMC injection, which was strongly indicative of a not infectious inflammatory reaction since infectious inflammations usually take at least 24 hours to show their symptoms. Standard treatment of anterior uveitis was initiated as prednisolone 1 % eye drop each 2 hours in first 2 days with tapering to two times a day for 30 days and tropicamide 1 % eye drop each 8 hours. We observed immediate improvement of patient's findings and followed the patient closely. Decreased pain and notable improved vision were documented after one month. Although posterior synechiae remained, visual acuity improved from 0.1 (1 logMAR) to 0.8 (0.0969 LogMAR), anterior chamber clarity improved and IOP reached 18 at the end of one month follow up period (Figure 2).

Discussion

Anterior uveitis might happen after trabeculectomy surgery; however, in our case, it was more likely the result of mitomycin C administration one month after trabeculectomy. This should be considered as a differential diagnosis of postoperative bleb

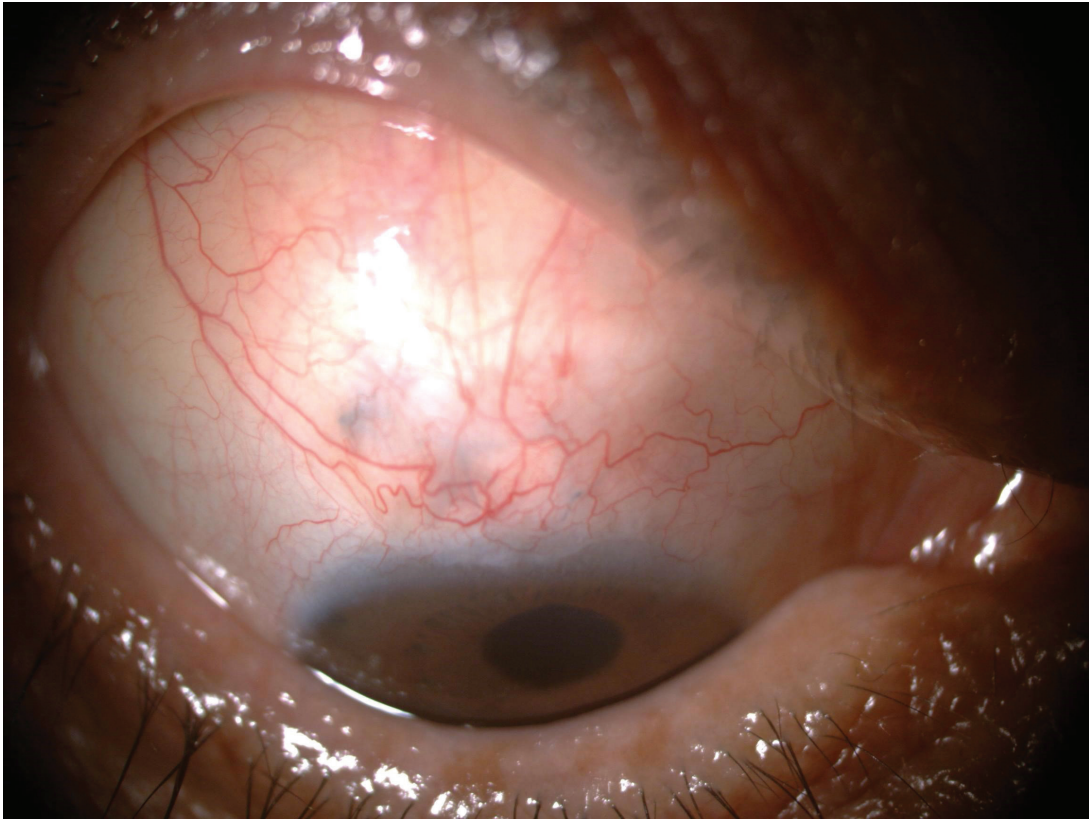


Figure 1: Right eye of patient after subconjunctival MMC injection

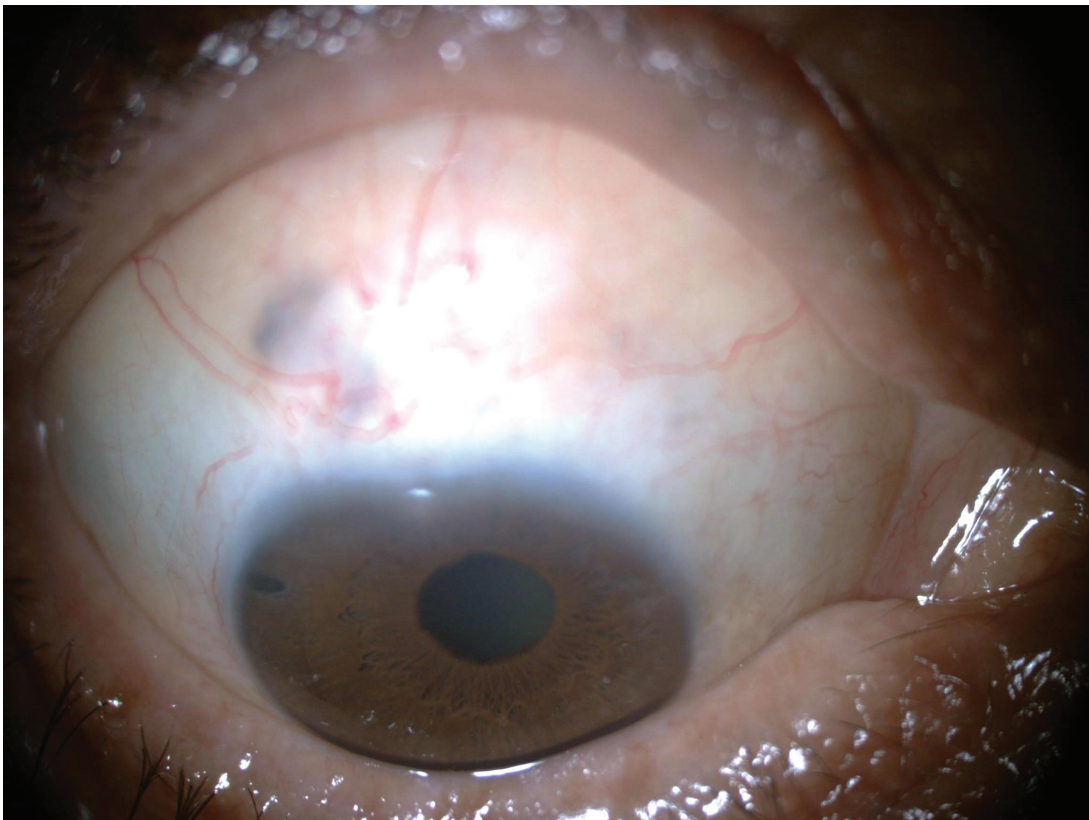


Figure 2: Right eye of patient after standard treatment of uveitis

infections. Subconjunctival MMC injection has a higher risk of toxicity compared to topical administration.

Few researchers have investigated the application of MMC by subconjunctival injection both in experimental and human filtration surgeries. Gandolfi et al³, injected subconjunctival MMC (0.5 ml, 0.2 %) in patients without any history of filtration surgery and IOP was decreased notably without any local complication. We applied a much lower dosage in our case (0.1 ml, 0.02 %) Although post-surgical anterior uveitis is usually related to trabeculectomy surgery itself; however, in our case, it was more likely the result

of MMC administration one month after trabeculectomy. This should be considered as a differential diagnosis of postoperative bleb infections.

Conclusion

To the best of our knowledge, the present study is the first case report of anterior uveitis after low dose subconjunctival injection of MMC in a patient with previous trabeculectomy. It seems that anterior uveitis is a rare side effect after subconjunctival MMC injection and should be considered in differential diagnosis of postoperative blebitis in glaucoma patients.

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Footnotes and Financial Disclosures

Conflict of Interest:

The Authors have no conflict of interest with the subject matter of the present manuscript.