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IP International Journal of Ocular Oncology and Oculoplasty

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Case Report

Serious ocular damage and chronic eye discharge: A missed hidden bandage contact lens

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Abstract

Contact lenses are artificial devices used by ophthalmic practitioners to place on the anterior corneal surface for various ocular conditions. They help correct the cornea's refractive error, irregularities, and surface abnormalities. We report a case of retained folded bandage contact lens in the upper tarsal space which was causing severe ocular inflammation and disturbance.

An elderly female presented with complaints of discharge, pain and redness in left eye since 1 year with no history of trauma or surgeries in the past who has consulted multiple hospitals for the same, found to have a retained bandage contact lens folded with debris and discharge from eye.

Wise use with adequate patient compliance, care and regular follow up is very essential in patients with bandage contact lens as it can become deleteriously harmful at times. Our case report is a reminder for practitioners in this field and to the patients using bandage contact lens.

Keywords: Bandage contact lens, Dry eye, Cornea, Contact lens

Received: 05-03-2025; **Accepted:** 29-04-2025; **Available Online**: 31-05-2025

1. Introduction

Contact lenses are synthetic devices placed on the front surface of the eye to replace the anterior corneal surface. They are designed to correct refractive errors, irregularities, and surface abnormalities of the cornea. The concept of contact lenses was initially introduced by Leonardo da Vinci in 1508, who envisioned neutralizing the cornea with a new refracting surface. In 1946, contact lenses made from polymethylmethacrylate (PMMA) gained popularity and became widely adopted.

Hydrogel and silicone-hydrogel contact lenses play a crucial role in supporting epithelial healing in chronic ocular surface conditions like neurotrophic keratitis.[1,2] The term "bandage lens" is commonly used for all types of soft contact lenses when they serve this purpose.[3] However, only a few hydrogel and silicone-hydrogel lenses are specifically approved for this use.[4]

The primary function of these lenses is to protect the delicate epithelium from the abrasive effects of blinking and other mechanical threats to the ocular surface. This protection aids in epithelial migration, shields Bowman's membrane, and minimizes the risk of haze formation.[5] Additional benefits include preventing epithelial damage in areas exposed to dryness due to eyelid disorders. Typically, soft bandage contact lenses (BCL) are used for a specific period until healing is complete.[6]

However, they may also be worn for longer durations, such as to protect the cornea from eyelid disorders while awaiting definitive surgical repair. Various types of lenses are used for this purpose, hydrogel lenses (SiHy) being the most common.[7] The use of bandage contact lenses requires careful consideration of potential risks and side effects especially in terms of oxygen permeability.[8]

Indications are numerous; optical- high myopia, unilateral aphakia, corneal scar, Corneal pathologies like

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http://doi.org/ 10.18231/j.ijooo.2025.007

pseudophakic bullous keratopathy, non-resolving corneal ulcer, recurrent corneal erosion syndrome, iris pathologies like aniridia, coloboma, glaucoma, as drug delivery system in paediatric cases, opaque contact lens for occlusion as in amblyopia, to cover epithelial defect post-surgery. It is utilised in diagnostic procedures like gonioscopy, electroretinography and Goldmann 3 mirror examination, used as a preventive measure in trichiasis, exposure keratitis and symblepharon, as an occupational protective aid in sportsmen, police and pilots, and also for cosmetic indications like corneal scar and phthisis bulbi.

We report a case of a folded bandage contact lens that remained in the upper tarsal space of an elderly patient who presented with a long history of bilateral dry eye symptoms and chronic discharge which seemed to be an unusual presentation in such a case, even though watering from eyes with discharge is a common sign and seen in multiple conditions like chronic dacryocystitis, nasolacrimal duct obstruction, keratitis, blepharitis and canaliculitis.

2. Case Presentation

78 year old female presented to our cornea clinic with complaints of pain, redness, watering and discharge from left eye since 1 year. No history of any ocular trauma or surgery in left eye. Patient consulted multiple hospitals since 1 year for the same and used multiple eyedrops for the same as per the patients knowledge. Right eye cataract surgery was done 1 year back and vision is satisfactory in that eye.

On examination a small mass, firm in consistency was palpable below the superior tarsus. We removed it with forceps and cotton buds by everting the lid, spread over a paper and it was found to be tissue debris and discharge with a folded bandage contact lens. Vision in right eye was 6/12 and left eye - PL positive (perception of light), Lacrimal syringing patent in both eyes, dry eye evaluation – Schirmer test re-5mm, le-3mm, tear film breakup time - immediate in both eyes, intraocular pressure by applanation tonometry was RE-15, LE- not recordable; on slit lamp examination RE showed pseudophakia with spheroidal degeneration at peripheral cornea ,left eye revealed severe yellowish white discharge over lids, caruncle with conjunctival congestion and shallow anterior chamber with hazy cornea. Thinning of cornea noted in the centre with iris tissue plugging.

This patient was seen by various general ophthalmologists in the periphery and somebody might have put bandage contact lens and left behind about which patient is totally unaware. Many ophthalmologists who have treated the patient in the last 1 year in the periphery haven’t noticed the left out bandage contact lens.

Figure 1: Right eye on presentation

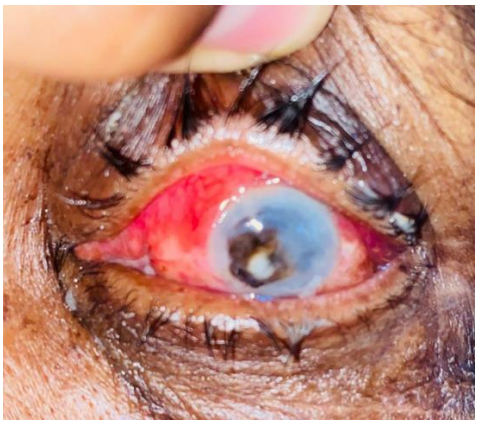

Figure 2: Left eye on presentation

Figure 3: Retained bandage contact lens

Figure 4: Left eye at 2 weeks follow up with descemetocele

2.1. Follow up

Patient was found to be having severe dry eye with mucous fishing syndrome from history and examination. She was advised to use lubricant drops for 2 weeks and review.

On review after 2 weeks patient's symptoms has improved significantly. Vision noted to be hand movements positive .Irritating discharge, pain and redness was settled. At 1 month follow up visit patient is comfortable and happy as the discharge and pain was the most troubling problem for her even though she is still on lubricating drops for severe dry eye.

3. Discussion

The diagnosis of retained bandage contact lens may be missed in the lack of proper history taking and ocular examination. More over the patient and party should be counselled properly regarding any procedure or intervention, be it invasive or non-invasive. Every necessary details about the precautions, follow-ups and complications should be made aware to the patient.

The term 'upper fornix trap' introduced by Bock in 1971, refers to a situation where a contact lens becomes "trapped" within the upper conjunctival fornix, with its lower edge wedged against the upper tarsal border.5 In this position, there is a risk of the contact lens causing erosion from the upper fornix into the subconjunctival space, which is facilitated by pressure necrosis of the surrounding tissue. Erosion of foreign bodies into the eyelid tissue may even present clinically as a cyst or chalazion.

Retained contact lens can be easily missed when its symptoms are mistaken for other conditions such as chronic dry eye, mucous fishing syndrome, corneal dystrophy, corneal ulcers, inflamed chalazion or ongoing conjunctivitis.

4. Conclusion

We bring this case to notice as a reminder for proper ocular examination of all cases, significance of ruling out all the possible differential diagnosis, importance of patient counselling regarding all the procedures done for them and follow up. Wise use with adequate patient compliance, care and regular follow up is very essential in patients with bandage contact lens as it can turn deleteriously harmful.

5. Declaration and Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

6. Source of Funding

None.

7. Conflicts of Interest

There are no conflicts of interest

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Cite this article Sharat S, Kolangarakandy N, Suresh Babu G. Serious ocular damage and chronic eye discharge: A missed hidden bandage contact lens. *IP Int J Ocul Oncol Oculoplasty*. 2025;11(1):33-35.