



Forgotten but Tolerated: A 15-Year Retained Silicone Lacrimal Stent in a Pediatric Patient

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Citation: Shah SM, et al. Forgotten but Tolerated: A 15-Year Retained Silicone Lacrimal Stent in a Pediatric Patient. *J Ophthalmol Adv Res.* 2026;7(1):1-3.

<https://doi.org/10.46889/JOAR.2026.7103>

Received Date: 05-12-2025

Accepted Date: 19-01-2026

Published Date: 26-01-2026



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Abstract

Silicone lacrimal intubation is an established treatment for Congenital Nasolacrimal Duct Obstruction (CNLDO) and is typically removed within a few months after insertion. Long-term stent retention is extremely uncommon and may lead to canalicular injury, infection or granuloma formation. We report a rare case of a bicanalicular silicone tube retained for 15 years without major complications, underscoring the need for diligent postoperative follow-up and awareness of silent tube retention.

Keywords: Congenital Nasolacrimal Duct Obstruction; Silicone Intubation; Retained Tube; Pediatric Ophthalmology; Dacryocystorhinostomy

Introduction

Congenital Nasolacrimal Duct Obstruction (CNLDO) affects approximately 5% of infants and most cases resolve spontaneously or with conservative management [1]. For persistent cases, silicone intubation following probing is a well-established procedure, with stents generally removed within 6 to 12 weeks [2]. Prolonged retention beyond one year is rare and reports of stents retained for over a decade are exceptional [3].

Retention can lead to various complications, including canaliculitis, conjunctival granuloma, punctal cheese wiring and nasal infection [4]. We describe an unusual case of a silicone lacrimal stent that remained in situ for 15 years without significant

morbidity—a remarkable example of tolerance to a forgotten foreign body in the lacrimal drainage system.

Case Report

An 8-year-old boy presented to our tertiary eye care center in December 2012 with bilateral epiphora since birth. Clinical examination and syringing confirmed Congenital Nasolacrimal Duct Obstruction (CNLDO) in both eyes. A standard left-eye probing with bicanalicular silicone intubation was performed under general anesthesia and the tube was secured at the nasal end. The right eye was left untreated. The patient was advised regular follow-up for tube removal after 3 months but was subsequently lost to follow-up. In June 2025, now aged 23, the patient presented again with persistent watering and mucous discharge from both eyes, more pronounced on the left. Ocular examination revealed a silicone tube loop visible at the left medial canthus (Fig. 1). There were no signs of conjunctival injection, canalicular stenosis or pyogenic granuloma. Nasal endoscopy confirmed the distal end of the stent intact and non-embedded in the nasal mucosa. The surrounding punctal and canalicular mucosa appeared healthy. There was no tenderness, purulent reflux or dacryocystic swelling. Diagnostic syringing revealed partial obstruction on both sides, consistent with secondary acquired nasolacrimal duct obstruction due to chronic inflammation. The 15-year retained stent was still flexible and intact on inspection, suggesting durable silicone integrity over time.

Management and Outcome

The patient underwent planned surgical removal of the silicone stent under local anesthesia. The tube was removed intact through the nasal cavity without resistance. Given the longstanding symptoms, an external Dacryocystorhinostomy (DCR) was proposed for definitive management, which the patient opted to schedule later. Post-removal, there was mild mucopurulent discharge that resolved with topical antibiotic–steroid therapy.

Discussion

Prolonged retention of a silicone lacrimal stent beyond the standard period is rarely tolerated without sequelae. Most reports describe complications developing within 1-2 years of retention, including canaliculitis, punctal laceration or granuloma formation [5,6]. Silicone is considered biologically inert, but chronic retention can induce foreign-body reactions or infection due to biofilm formation [7]. In our case, the complete absence of canalicular injury or nasal granuloma after 15 years is extraordinary. Several factors may explain this tolerance, including atraumatic initial insertion, correct nasal positioning and absence of local infection. Reports of asymptomatic long-term retention exceeding 10 years are exceedingly scarce in the literature [8].

This case serves as a reminder that failure to ensure postoperative follow-up can result in unrecognized foreign body retention. It emphasizes the necessity of robust patient education, proper documentation and recall systems—especially in pediatric cases where follow-up compliance is often challenging [9]. Regular postoperative evaluation allows early detection of extrusion, displacement or obstruction, preventing chronic sequelae.

Conclusion

This rare case of a 15-year retained silicone lacrimal stent demonstrates the potential for long-term tolerance of inert foreign material in the lacrimal drainage system. While the absence of complications in this case is remarkable, it reinforces the critical importance of timely follow-up and scheduled stent removal to prevent adverse outcomes.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding Statement

This research did not receive any specific grant from funding agencies in the public, commercial or non-profit sectors.

Acknowledgement

None

Data Availability Statement

Not applicable.

Ethical Statement

The project did not meet the definition of human subject research under the purview of the IRB according to federal regulations and therefore, was exempt.

Informed Consent Statement

Informed written consent was obtained from the patient for publication of clinical details and images.

Authors' Contributions

All authors contributed equally to this paper.

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