

CORNEAL KELOID ARISING FROM A RADIAL KERATOTOMY INCISION: CASE REPORT

FREITAS G, MD, PhD (private practice).
VALADARES E, MD (private practice).
BORGES L, MD (private practice).
ALVES M, MD, PhD (USP, University of São Paulo).

Abstract

Corneal keloids, although rare, may result from radial keratotomy incisions. We report a case of an asymptomatic lesion diagnosed in candidate for cataract surgery.

Resumo

Quelóides corneanos, apesar de raros, podem originar-se de incisões de ceratotomia radial. Relatamos um caso de lesão assintomática diagnosticada em paciente candidato à cirurgia de catarata.

Introduction

Corneal keloid is a rare ophthalmic condition, with approximately 85 reported cases. (PALKO, 2019). Corneal keloids are characterized by focal white-greyish elevated, painless lesions on the cornea, that can be vascular or nonvascular, with well-defined borders and varying thickness and size. (MINAMIDATE, 2023; LI, 2022) Corneal keloids may occur months to years after a corneal insult, most often in children and young adults. (PALKO, 2019) The condition's etiology remains unknown. (LI, 2022) We report a case of a corneal keloid in a 72-year-old male who has presented for a routine cataract surgery evaluation.

Case summary

A white 72-year-old male has presented for preoperative evaluation for cataract surgery. Except for the cataractous lenses and radial keratotomy (RK) corneal incisions in both eyes, performed nearly 30 years before, the only relevant finding was a painless, whitish round elevated lesion, no larger than 1 mm at any direction, arising from one of the RK incisions in his left eye. An excisional biopsy has been considered, but refused, by the patient. We have suspected of a corneal keloid based on the clinical history, and slit lamp examination. Then, routine phacoemulsification under topical anesthesia and mild sedation was indicated for both eyes.

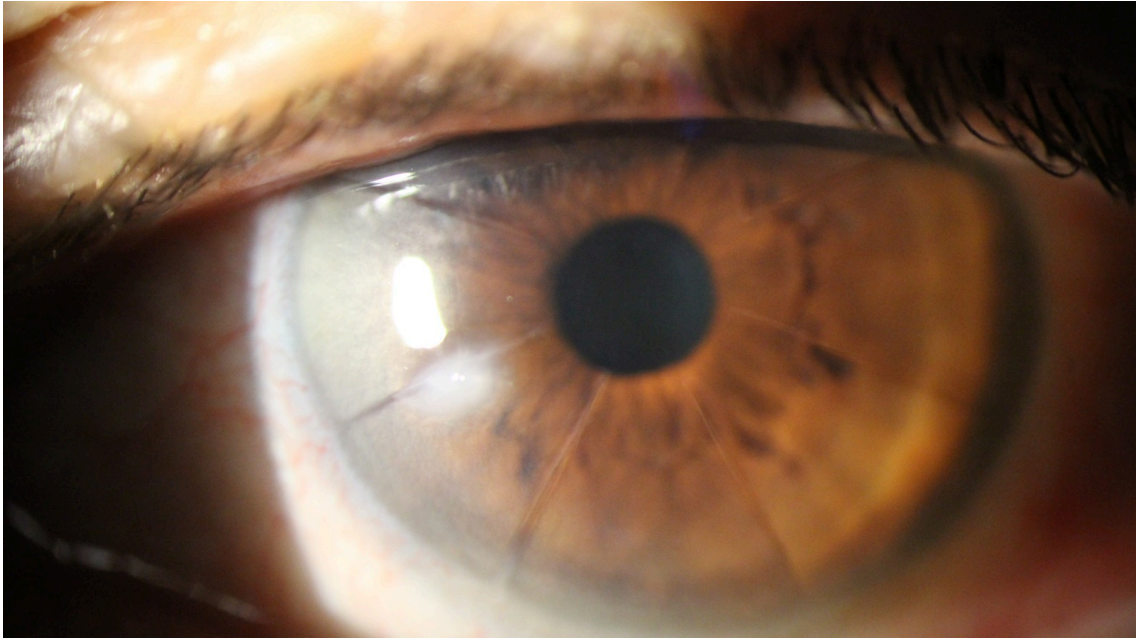


Figure 1. Corneal keloid arising from a radial keratotomy incision (72-year-old white male).

Discussion

The diagnosis has been established on the remarkable clinical features of the lesion. The patient's refusal to proceed to anatomopathological analysis has made a definite diagnosis (PALKO, 2019) unachievable.

Due to the rarity of this finding, an image of this patient's eye was awarded in an international contest on Ophthalmology Photographs (ahead of publication) and accepted for publication in the American Academy of Ophthalmology website (available since July 13th, 2023 at <https://www.aao.org/education/image/corneal-keloid-in-radial-keratotomy-rk-wound>). Five days later, the first case report on corneal keloid formation among RK patients was available at PubMed. (GUPTA, 2023) Several clinical similarities with our case could be noticed in that publication.

Conclusion

We have depicted an image of rare condition, for which there is only one publication, independently made nearly at the same time by other authors.

References

1. PALKO JR, ARFEEN S, FAROOQ AV, REPPA C, HAROCOPOS GJ. Corneal keloid presenting forty years after penetrating injury: Case report and literature review. *Surv Ophthalmol.* 2019 Sep-Oct;64(5):700-706. doi: 10.1016/j.survophthal.2019.02.010. Epub 2019 Mar 6. PMID: 30849427.

2. MINAMIDATE R, TOYONO T, ASAHINA Y, YAMAZAWA S, MIYAI T. Corneal keloid caused by persistent atopic eye disease and chronic eyelid closure. *Am J Ophthalmol Case Rep.* 2023 Feb 15;30:101819. doi: 10.1016/j.ajoc.2023.101819. PMID: 36860890; PMCID: PMC9969198.
3. LI S, LEI J, WANG YH, XU XL, YANG K, JIE Y. Rare giant corneal keloid presenting 26 years after trauma: A case report. *World J Clin Cases.* 2022 Sep 26;10(27):9776-9782. doi: 10.12998/wjcc.v10.i27.9776. PMID: 36186176; PMCID: PMC9516904.
4. GUPTA N, KHAN TA, JHAJHARIA H, KASHYAP S. Rare case of corneal keloid following radial keratotomy for myopia. *BMJ Case Rep.* 2023 Jul 18;16(7):e252776. doi: 10.1136/bcr-2022-252776. PMID: 37463775; PMCID: PMC10357791.