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*Case report*
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# Double rosette cataract: a case report

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## Abstract

Cataract is commonly seen in the elderly population and is a major cause of blindness in Malaysia. The most common morphological types of cataracts associated with the elderly are cortical, nuclear, and posterior subcapsular cataract. Rosette cataracts are commonly associated with blunt trauma. We report a case of a patient who presented with unilateral, non-traumatic, double rosette cataract. He successfully underwent cataract extraction with posterior chamber intraocular lens implantation and the final visual outcome was good.

*Keywords:* double rosette cataract, non-traumatic cataract

## Katarak roset berganda: laporan kes

## Abstrak

Katarak biasa dijumpai di kalangan populasi warga emas dan merupakan faktor penyebab utama kebutaan di Malaysia. Jenis morfologi katarak yang biasa terdapat di kalangan warga emas termasuk katarak kortikal,katarak nuklear dan katarak posterior subkapsular. Katarak roset selalunya dikaitkan dengan trauma tumpul. Kami melaporkan suatu kes di mana pesakit mengidap katarak roset berganda di sebelah mata sahaja yang tidak dapat dikaitkan dengan sebarang trauma. Pesakit berjaya melalui pembedahan katarak dengan implantasi kanta intraokular posterior dengan pemulihan penglihatan yang baik selepas pembedahan.

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*Kata kunci:* katarak roset berganda, katarak tidak berkaitan dengan trauma

## Introduction

Cataract is the major cause of bilateral blindness in many countries, including Malaysia according to the Malaysian National Eye Survey (NES II) of 2018.[1] Using the Rapid Assessment of Avoidable Blindness (RAAB) method, NES II reported untreated cataract as the leading cause of blindness in Malaysia.[1] Numerous reports have been published in the past regarding cataract and the pathophysiology underlying its development.[2] Based on a literature search in PubMed, we found limited data available for rosette cataract. Shah *et al.* classified all traumatic cataract according to morphology and reported 8% of rosette cataract.[3] We describe a case of a patient who presented with unilateral, non-traumatic, double rosette cataract.

## Case presentation

A 56-year-old Malay man with underlying hypertension and ischaemic heart disease presented with painless, progressive, generalized blurring of vision for 2 years. He had no history of floaters or flashes of light. He denied any history of previous trauma and was currently a pensioner.

His best-corrected visual acuity was 1/60 in the right eye and 6/24 in the left eye. The slit lamp examination showed a stellate pattern cataract in the right eye (Figs. 1–3). Examination of the left eye showed nuclear sclerosis and posterior subcapsular cataract. Other anterior segment findings were unremarkable. The intraocular pressure was 17 mmHg for both eyes. Bilateral posterior segment examination was normal. There was no significant family history of similar cataract to suggest familial or hereditary traits. The patient had no history of metabolic diseases or diabetes mellitus as evidenced by the pre-clerking random blood sugar of 5.6 mmol/L, which was within normal limits. He subsequently underwent a successful cataract extraction with intraocular lens implantation in the right eye. Six weeks postoperatively, his best-corrected visual acuity was 6/7.5.

## Discussion

Petaloid or double rosette cataract is classically seen in patients with blunt trauma to the eye following direct lens trauma or concussion to the lens.[4] The lens opacity may appear immediately after the trauma or with a delay of up to a few months and may progress to become more severe over time. There is limited literature available

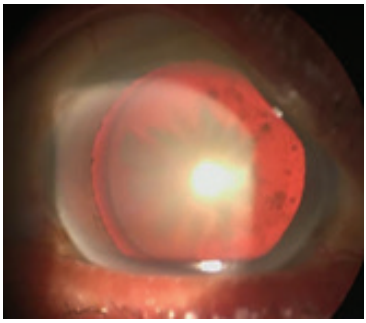

*Fig. 1.* Retroillumination view of double rosette cataract in the right eye.

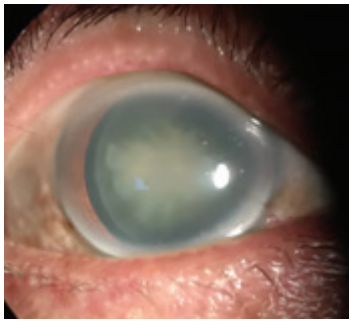

*Fig. 2.* Diffuse illumination of double rosette cataract in the right eye.

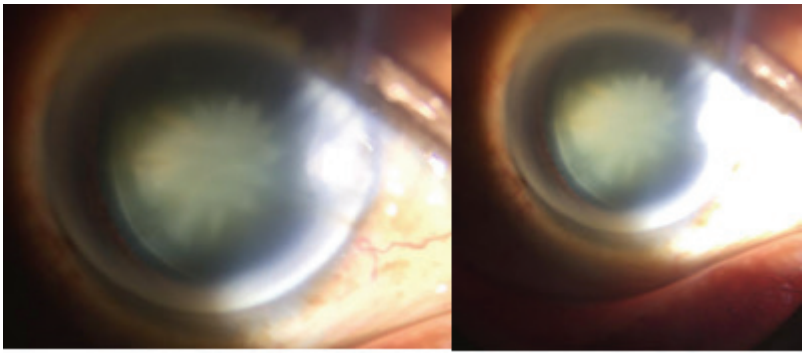

*Fig. 3.* Slit lamp view of double rosette cataract in the right eye.

describing non-traumatic double rosette cataract. The few reported incidences of non-traumatic rosette cataract include cases following an acute hyperglycaemic state in a diabetic patient as well as following electrical injury and lightning injury.[5-7] However, our patient denied association with any of the conditions mentioned above; the identification of this type of cataract was an accidental finding during ophthalmology examination for typical cataract symptoms in an aging patient., In the absence of other signs of trauma to other ocular structures, a history of unnoticed trivial injury is unlikely in this patient. The incidence of this type of non-traumatic cataract remains unknown. In 2019, Sethi *et al.* reported the most recent data on double rosette cataract in a patient without significant history of trauma or systemic illnesses.[4] To date, this is the only article published that we came across after extensive navigation via several search engines. Thus, limited knowledge is available regarding its pathogenesis and possible associated risk factors.

## Conclusion

Non-traumatic double rosette type of cataract has never been reported in Southeast Asia. We report a case of double rosette cataract found incidentally in our clinic.

## Declarations

**Consent for publication**
The patient provided informed consent for the use of the clinical images and information contained in this case report.

**Competing interests**
None to declare

**Funding**
None to declare

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None to declare

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