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(CASE REPORT)

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Cataracta Pulverulenta: A descriptive single case report

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Abstract

Background: Cataracta pulverulenta is a rare autosomal dominant genetic condition characterized by fine granular opacities in the embryonic nucleus of the lens.

Objective: To present a case of bilateral cataracta pulverulenta in a 36-year-old female and discuss its clinical features, diagnosis, and management.

Case Presentation: A 36-year-old female presented with a 6-month history of gradual diminution of vision in both eyes. Visual acuity was counting fingers at 2 meters bilaterally. Slit-lamp examination revealed bilateral, fine granular opacities scattered throughout the lens, diagnostic of cataracta pulverulenta. Fundus examination and intraocular pressure were normal.

Conclusion: Cataracta pulverulenta, though rare, can be managed conservatively with regular monitoring and visual correction. Surgical intervention is indicated when the condition significantly affects daily functioning.

Keywords: Cataracta pulverulenta; Autosomal dominant inheritance; Bilateral cataract; Lens opacities

1. Introduction

Cataracta centralis pulverulenta, also known as Coppock cataract, is classically described as non-progressive and congenital. It typically presents as bilateral, fine dust-like opacities in the central (embryonic nuclear) region of the lens. [1,2] Although uncommon, its unique clinical presentation and genetic basis make it a notable entity in ophthalmology. This case report aims to highlight its clinical features, diagnostic process, and management strategies.

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2. Case Presentation

A 36-year-old female presented to the ophthalmology clinic with complaints of gradual diminution of vision in both eyes for 6 months. There was no history of ocular trauma, systemic illness, or prolonged steroid use.

2.1. Clinical Findings

- Visual Acuity: Counting fingers at 2 meters bilaterally.
- Slit Lamp Examination: Bilateral small, rounded fine granular opacities scattered throughout the lens. The central visual axis was minimally affected.
- Intraocular Pressure (IOP): 14 mmHg in the right eye, 16 mmHg in the left eye.
- Fundus Examination: Normal in both eyes.
- Placido Disc: No crowding of mires.

Diagnosis: Cataracta pulverulenta was diagnosed based on clinical features and slit-lamp findings.

2.2. Investigation

The diagnosis was primarily clinical, supported by slit-lamp findings. Genetic testing was not performed but would be beneficial in confirming the autosomal dominant inheritance pattern.

3. Discussion

Cataracta pulverulenta typically manifests as fine, powdery opacities confined to the embryonic nucleus.[2] These opacities are often inherited in an autosomal dominant pattern, making family history an essential aspect of diagnosis.

Differential Diagnosis: Includes other nuclear cataracts, congenital cataracts, and posterior subcapsular cataracts.

4. Management

- Conservative: Spectacle correction to optimize visual acuity.
- Monitoring: Regular follow-up to assess progression and functional impact.
- Surgical Intervention: Indicated if the cataract progresses significantly, impairing daily activities.

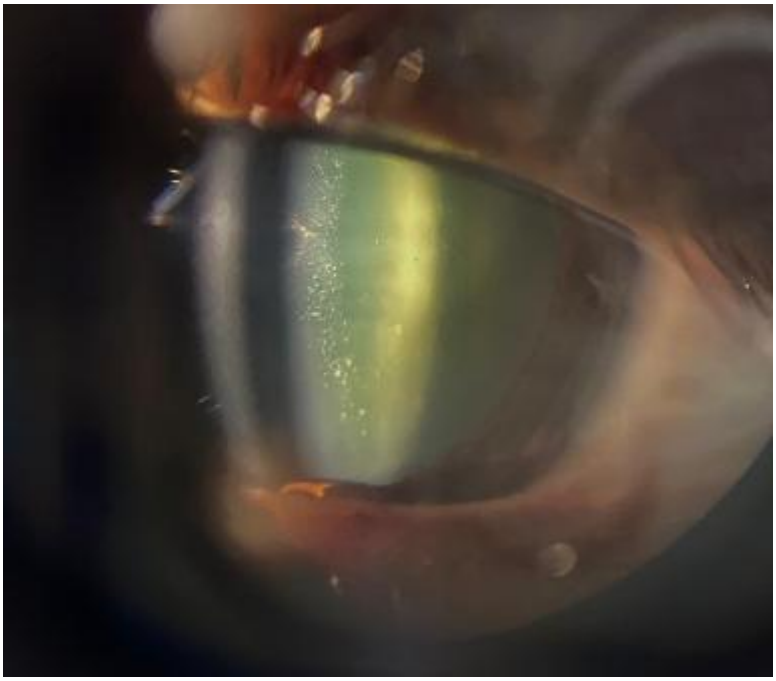

Figure 1 Slit-lamp image showing fine granular opacities characteristic of cataracta pulverulenta.

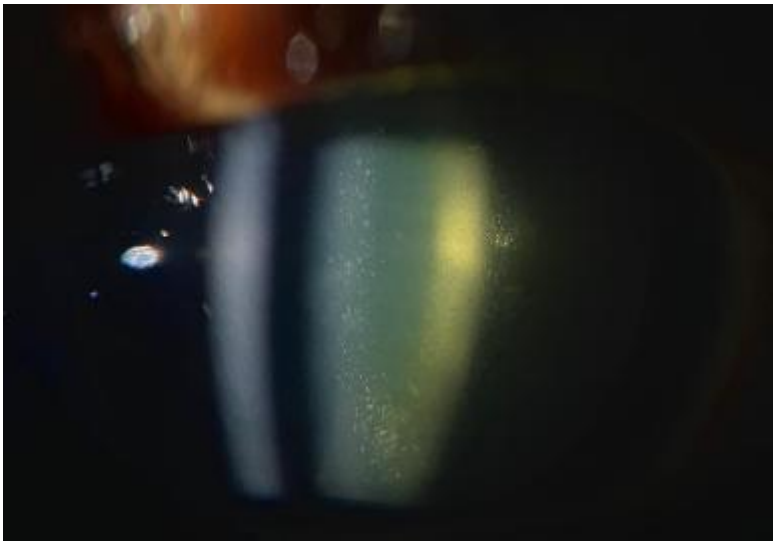

Figure 2 Another view of the granular opacities observed in the lens**.**

5. Conclusion

Cataracta pulverulenta is a rare, autosomal dominant genetic condition characterized by fine granular opacities in the embryonic nucleus of the lens. While it can initially be managed conservatively, surgical intervention may be necessary as the condition progresses. Early diagnosis and regular monitoring are critical to optimizing outcomes for affected patients.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

The authors declare no conflicts of interest.

Statement of informed consent

Patient consent was obtained for the publication of this case report.

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