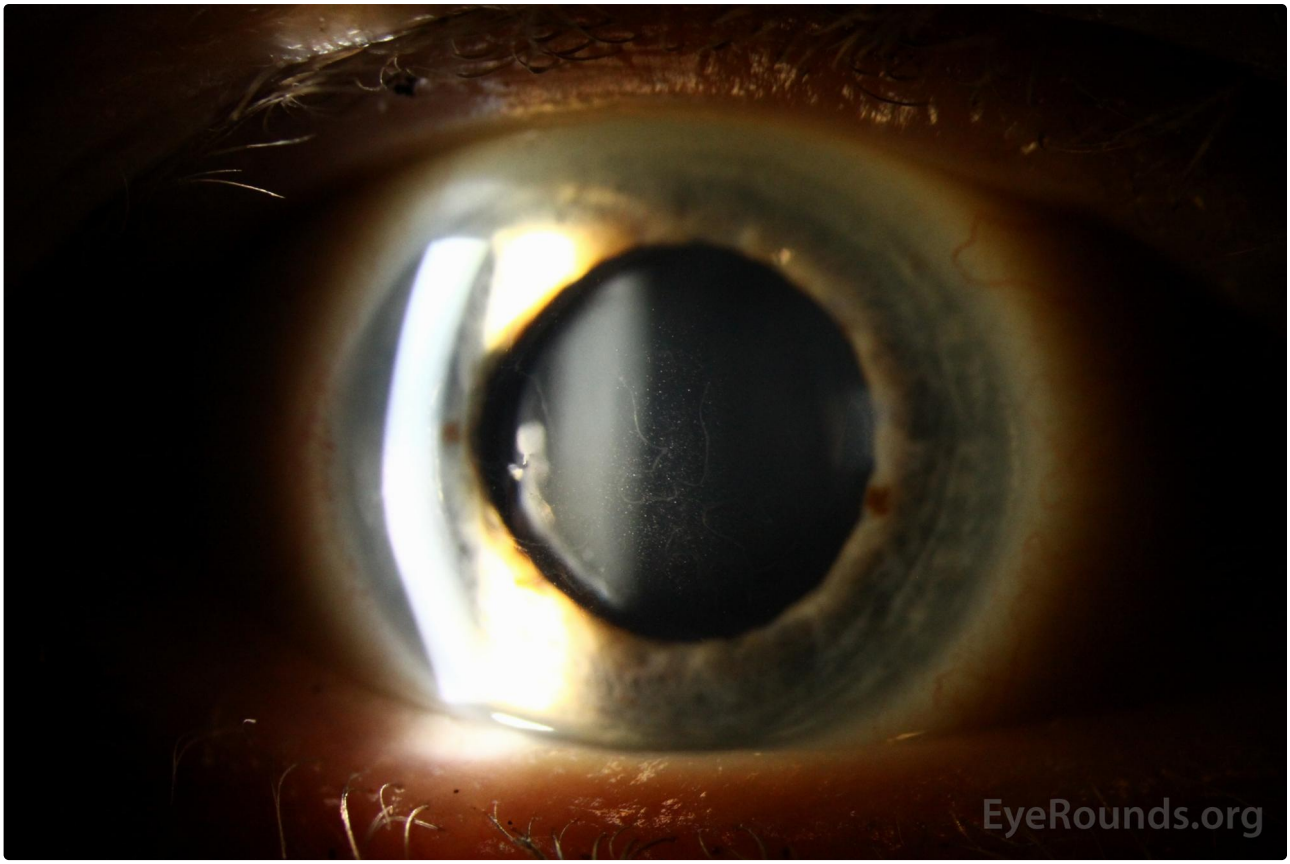
Meesmann Epithelial Corneal Dystrophy

Category(ies): Cornea

Contributor: Lorraine M. Provencher, MD

Photographer: Brice Critser, CRA

This patient had both Meesmann epithelial corneal dystrophy and striking epithelial basement membrane dystrophy (EBMD), neither of which were symptomatic.



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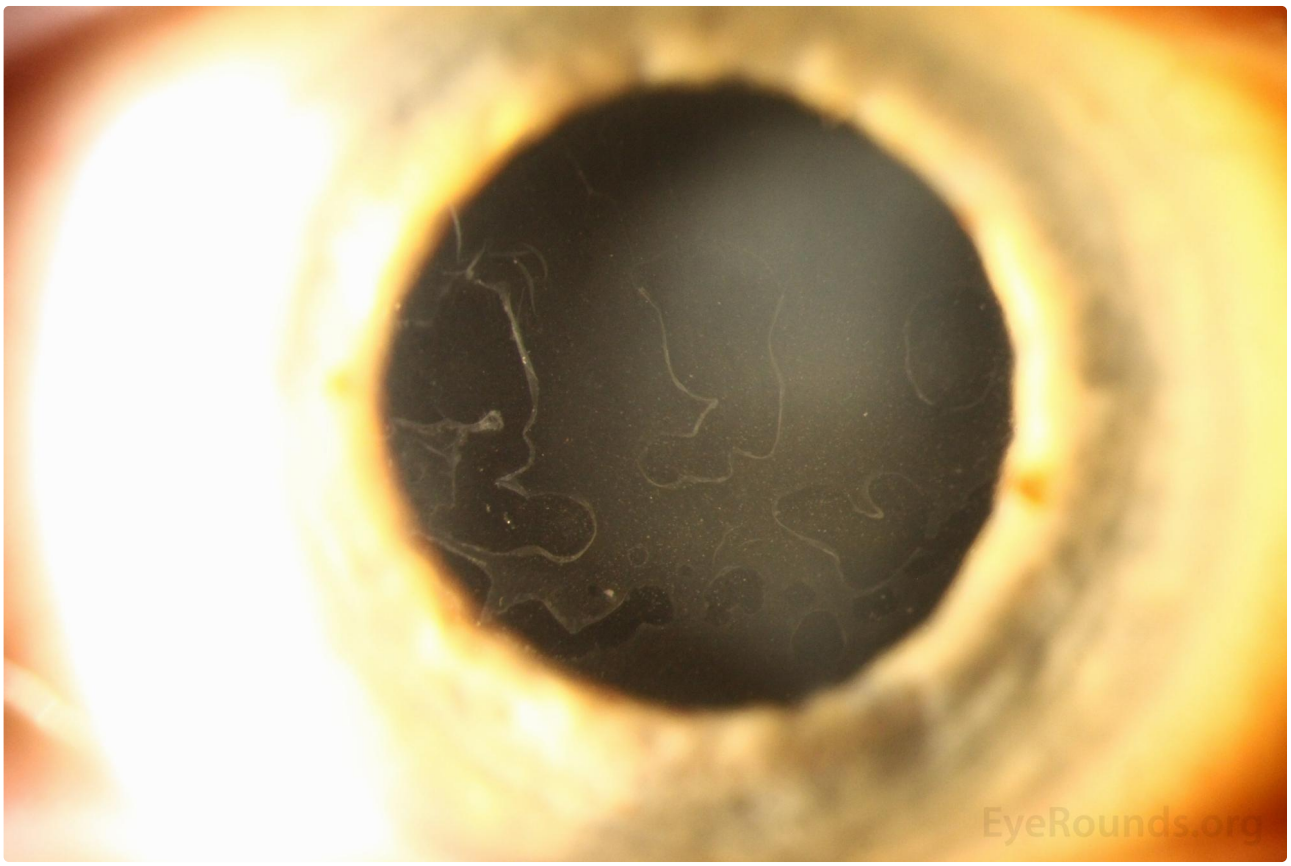

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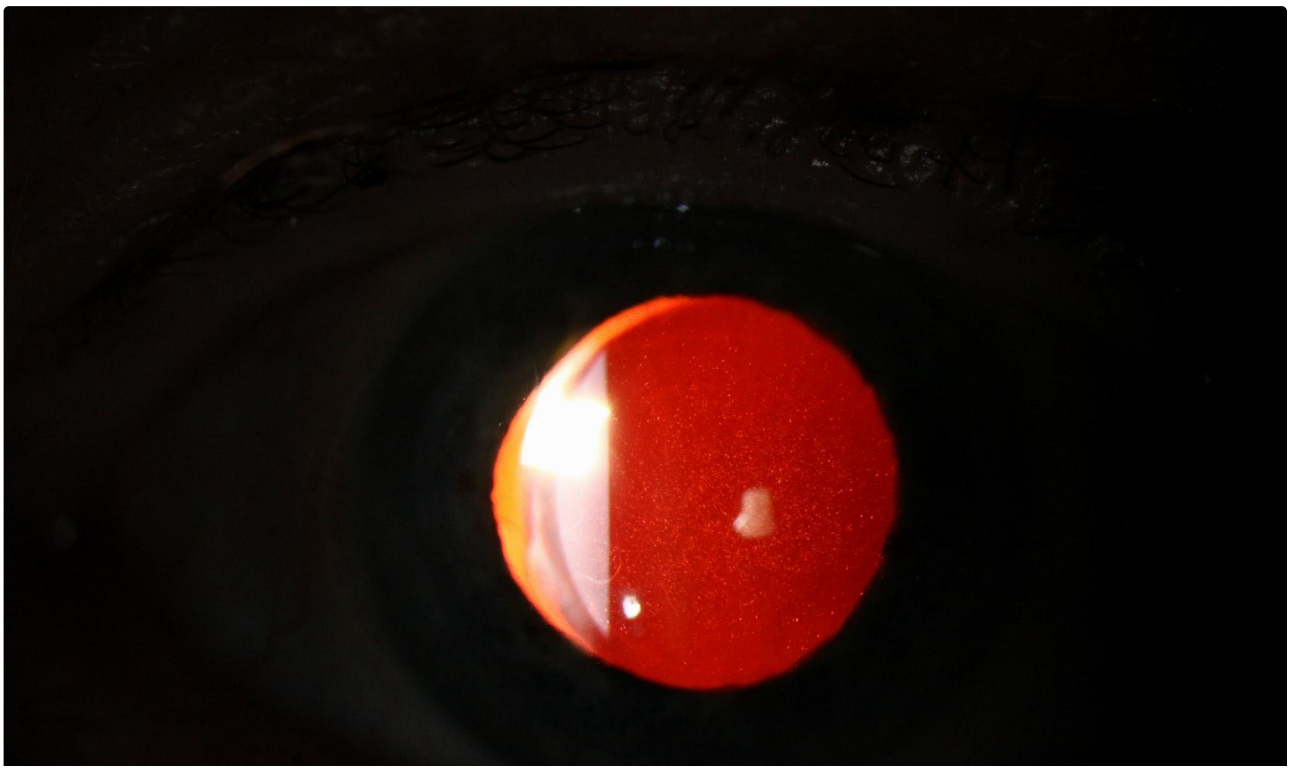

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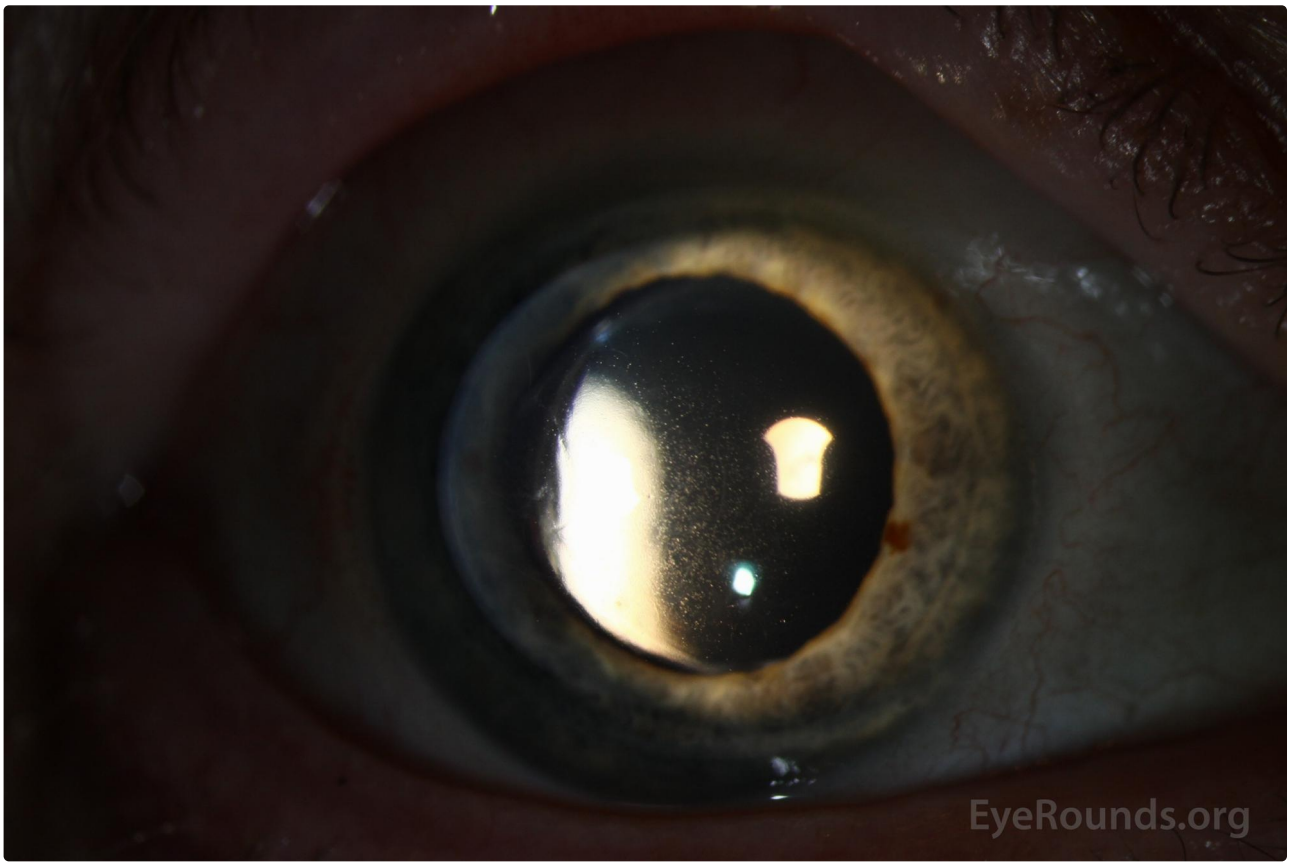

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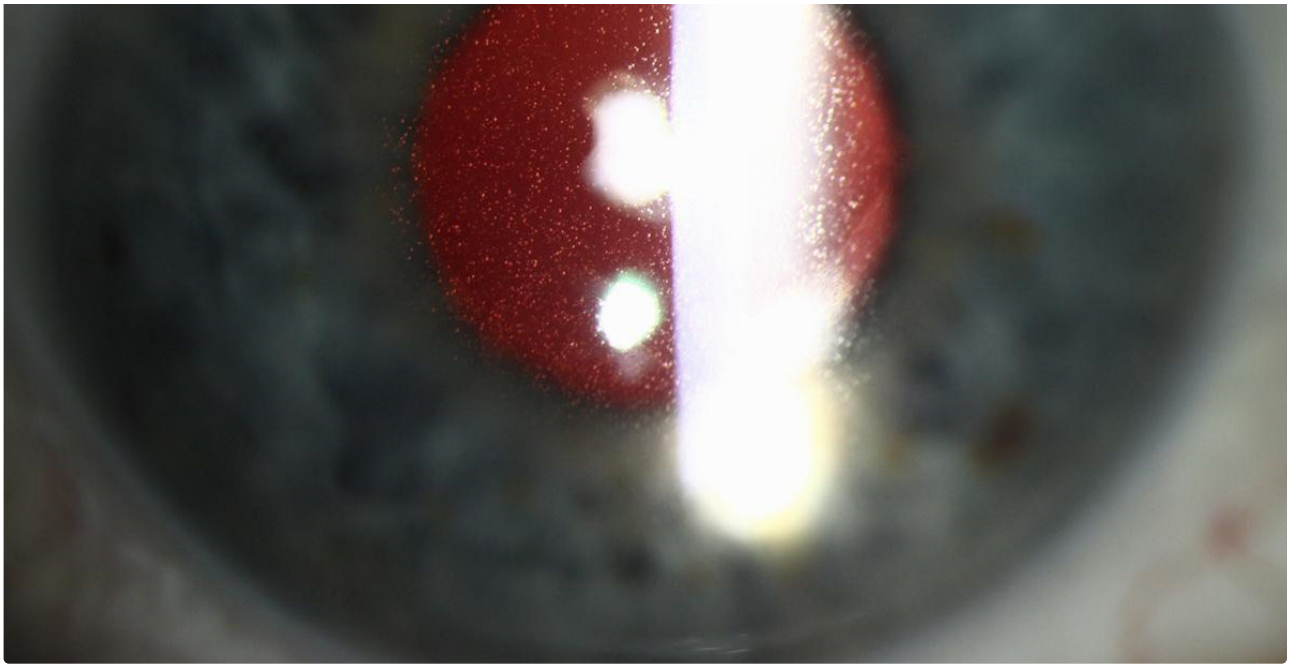
Contributor: Christopher Kirkpatrick, MD

Photographer: Toni Venckus, CRA

Meesmann epithelial corneal dystrophy (aka, juvenile hereditary epithelial dystrophy) is an autosomal dominant condition with a mutation in the gene keratin K3 (KRT3) at locus 12q13. Patients with this condition will manifest pathology early in life. The cornea will have multiple, tiny epithelial vesicles that are diffusely distributed and will extend all the way to the limbus. These bubble-like blebs are more numerous in the interpalpebral area and are best visualized with retroillumination. The epithelium adjacent to the cysts is clear, but there can be whorled and wedge-shaped epithelial patterns. The findings are bilateral and limited to the corneal epithelium. Pathology will show that these microcysts consist of degenerated epithelial cell products. The epithelial cells themselves contain "peculiar substance" - an electron-dense

accumulation of granular and filamentary material. There is frequently a thickened basement membrane with projections into the basal epithelium. Symptoms are usually mild and generally limited to glare, light sensitivity, irritation and slight decrease in vision. No treatment is typically required.



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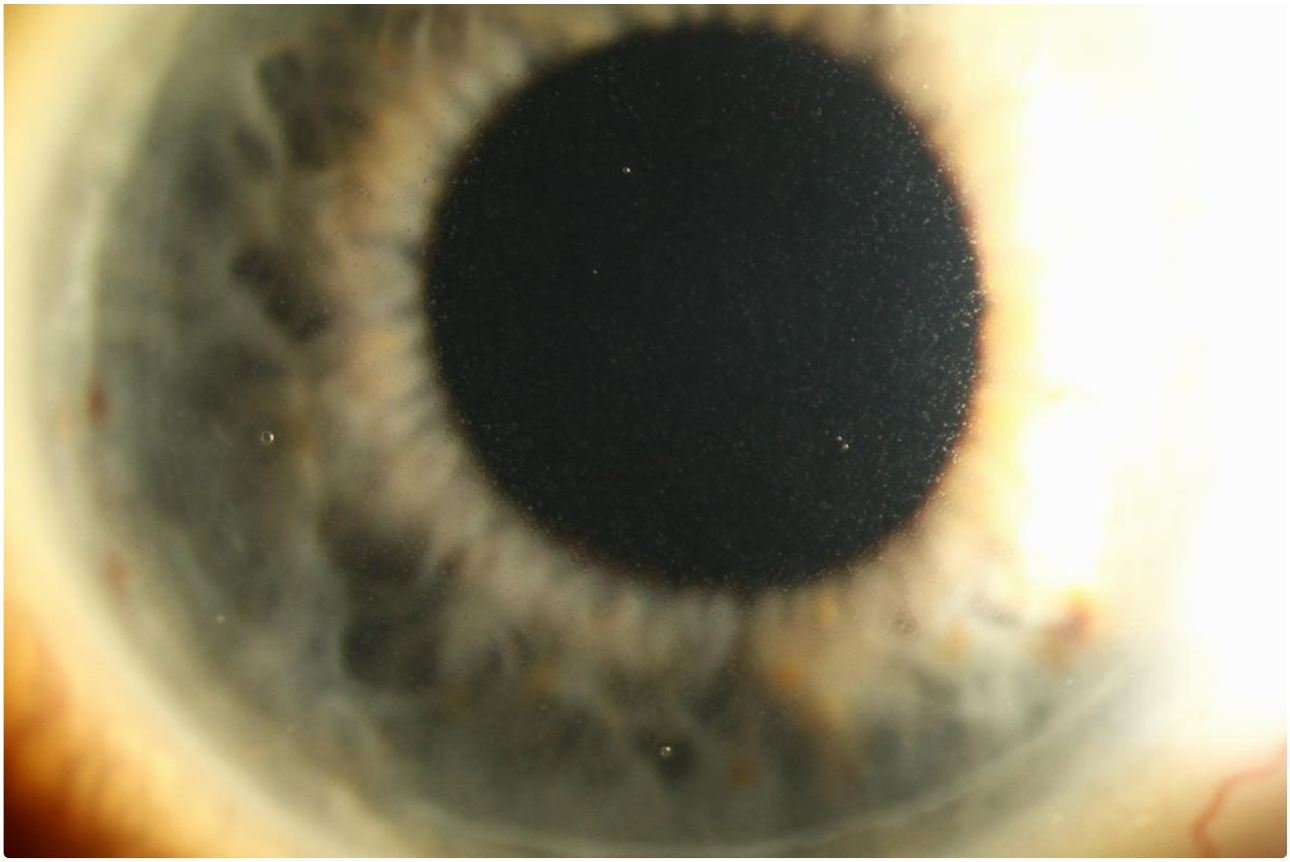

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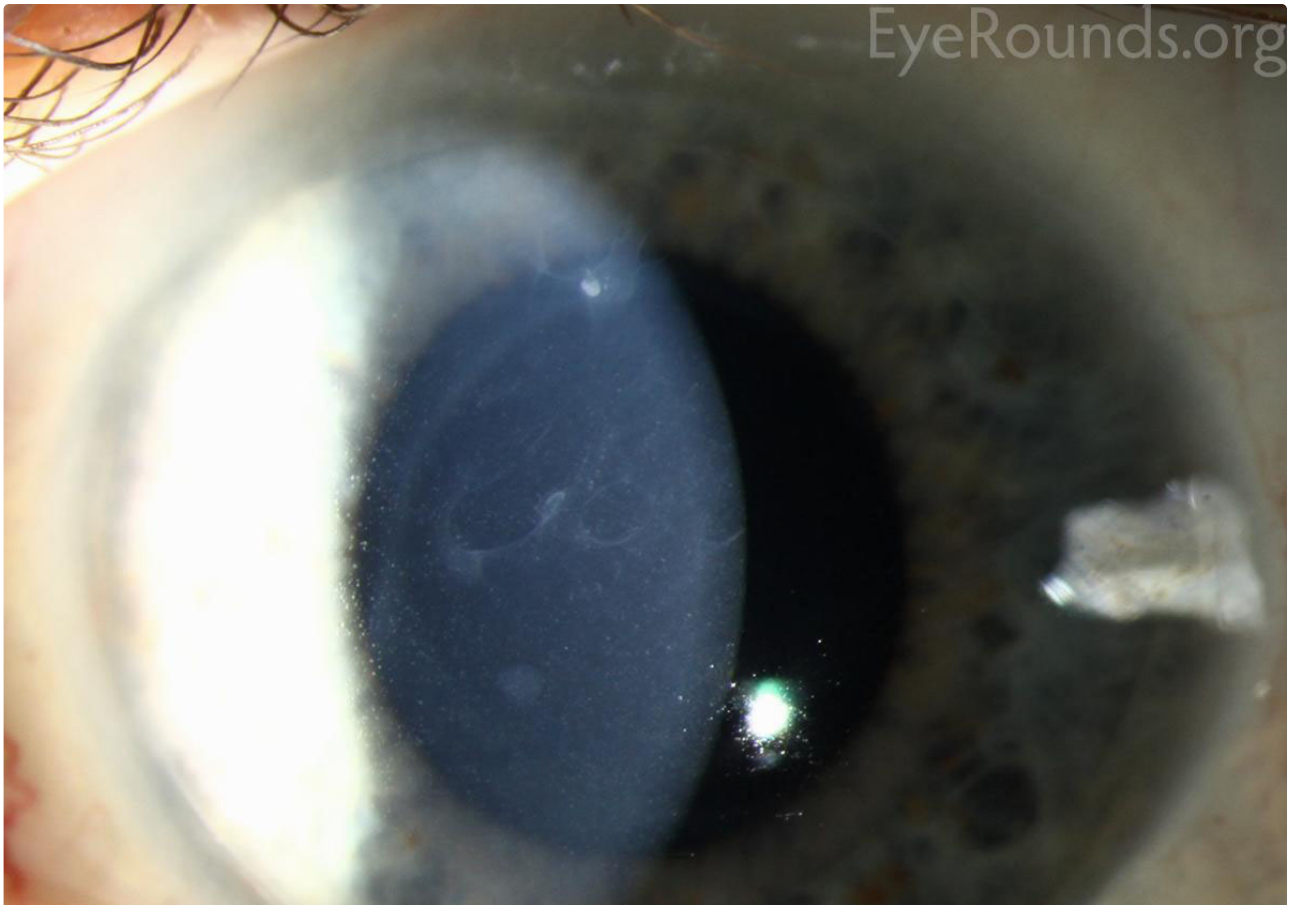

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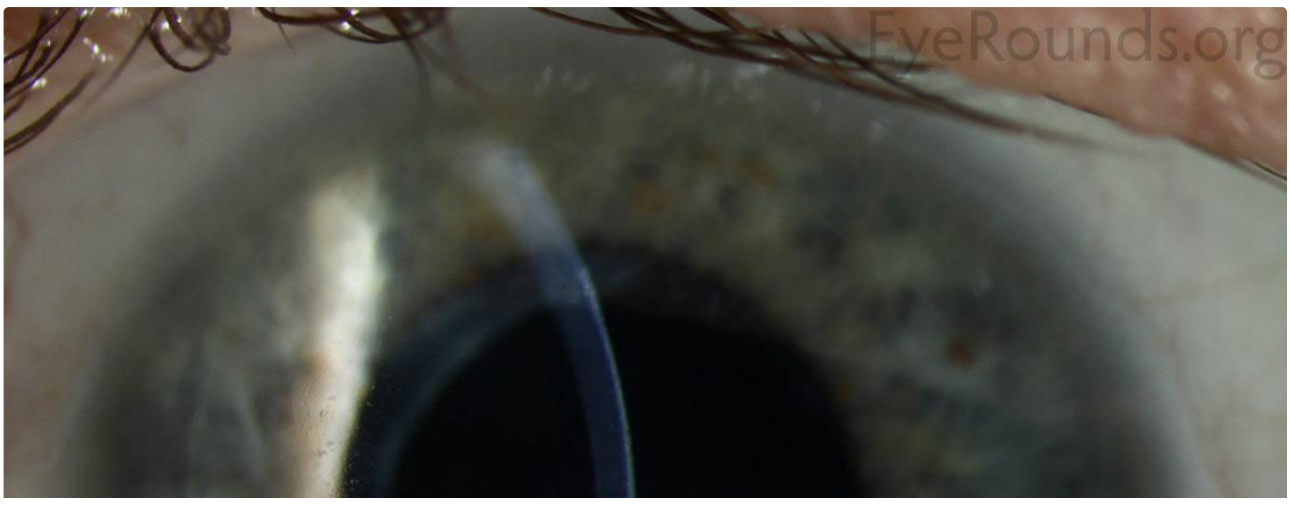

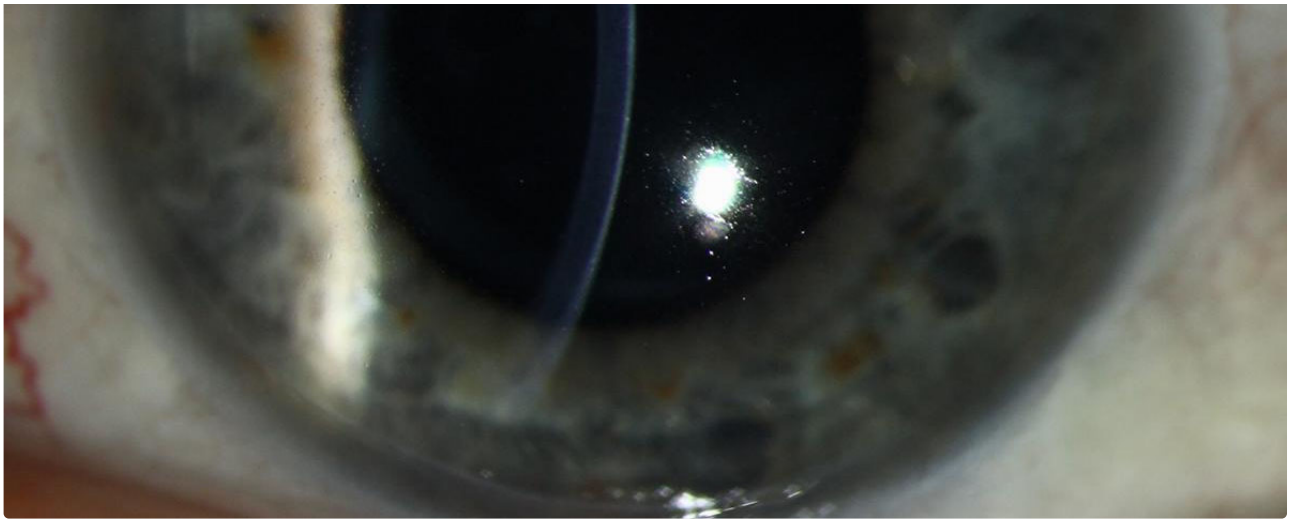

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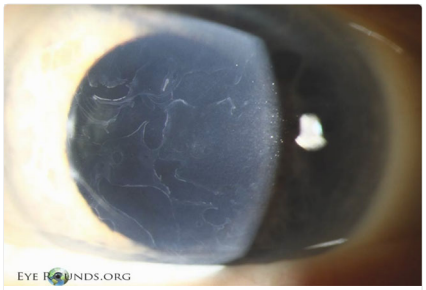

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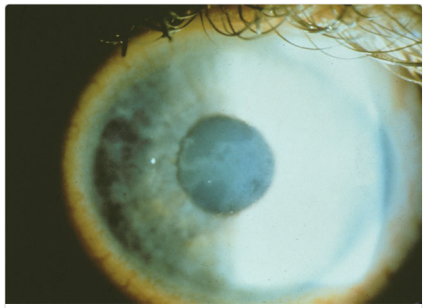

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