

# History

- A 35-year-old male presents with bilateral corneal opacities. Examination shows a honeycomb-type dystrophy. A penetrating keratoplasty is performed and the specimen sent for ophthalmic histopathological assessment.
- Figure 1 is the haematoxylin & eosin (H&E).
- Figure 2 is a Masson trichrome stain.
- Figure 3 is a transmission electron micrograph of the pathology shown in Figures 1 and 2.

## Questions

- What are the key features on the H&E?
- What does the Masson trichrome show?
- What does the electron micrograph display?
- What is the likeliest diagnosis?
- What is the H&E differential diagnosis?

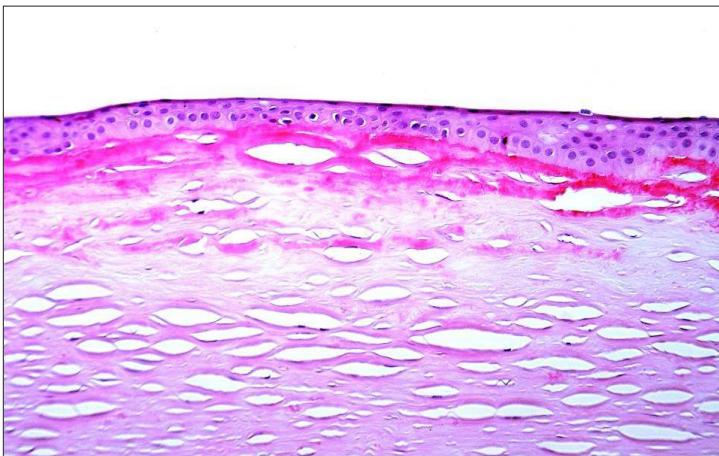


Figure 1

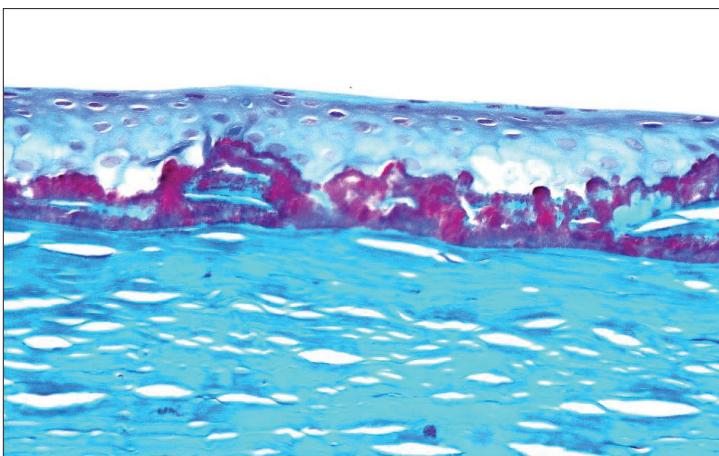


Figure 2

5. The main H&E differential is Thiel-Behnke dystrophy. This is essentially an anterior variant of granular dystrophy (BIGH3 family), which is matching the distribution on the H&E.

4. This is a good example of Reiss-Buckler deposits. 3. Electron dense rhomboidal deposits.

2. Masson's trichrome positive deposits epithelial atrophy.

1. Sub-epithelial eosinophilic diffuse deposit with some in the anterior stroma, with epithelial atrophy.

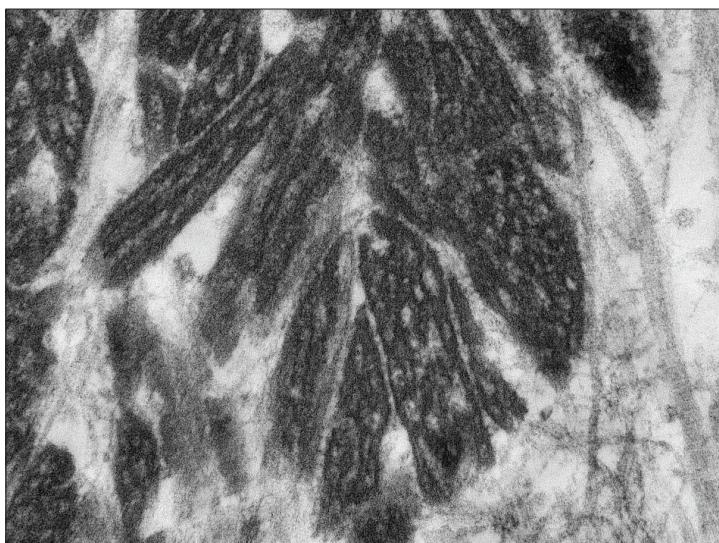


Figure 3

## ANSWERS

### AUTHOR

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