

Confocal Microscopy of Corneal Dystrophies

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Summary

Purpose

Review of the latest articles about the use of in vivo confocal microscopy (IVCM) with the Rostock Cornea Module of the Heidelberg Retina Tomograph 3 (HRT 3) in the diagnosis of corneal dystrophies.

Methods

Compilation of eighteen different types of corneal dystrophies classified according to the layer of appearance (Epithelium, Bowman Layer, Anterior and Posterior Stroma and Endothelium). Description and illustration of the diseases with their morphological characteristics, which can be detected with the Rostock Cornea Module of the HRT 3.

Discussion

The purpose of this review is to support clinicians in the determination of corneal dystrophies with IVCM, when a diagnosis is otherwise uncertain and to demonstrate the advances made to date by using the Rostock Cornea Module of the HRT 3 in identifying corneal dystrophies.

Conclusion

- “This modality is a useful technique to differentiate corneal dystrophies in vivo, bypassing the dependence on genetic studies and histopathology. IVCM may further be helpful in determination of progression, and understanding the pathophysiology of disease.”
- “The ability to provide high-resolution images of all layers in the living cornea has resulted in new discoveries of corneal pathology at the cellular level.”

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