Appearance of herpes simplex keratitis on anterior segment optical coherence tomography

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Abstract:

Purpose: To describe the anterior segment AS-OCT findings of herpetic simplex keratitis. Methods: Forty-two eyes of 42 patients with proven herpetic keratitis of varying severity were included in this prospective, observational, non-comparative case series. All subjects underwent ophthalmologic examination and AS-OCT imaging. Results: Twenty-five of the 42 eyes (59.5%) had subepithelial infiltrates. In 11 of these cases, the overlying epithelium was appeared intact, but in 14 cases, hydropic changes, heaping, and defects were observed. Seventeen eyes (40.5%) showed stromal involvement: 6 case of scarring at presentation and one case associated with uveitis. Stromal infiltrates were also seen, in 10 cases, as a diffuse or local lentiform or spindle-shaped hyper-reflective area in the stroma. Conclusion: Herpetic keratouveitis has characteristic features on AS-OCT images. This study demonstrates that herpetic keratitis also has characteristic AS-OCT features, including subepithelial infiltration and specific stromal hyper-reflective patterns. These features are not unique to herpetic keratitis, but AS-OCT imaging may provide useful supplementary information for diagnosing and monitoring herpetic keratitis.

Keywords:

Herpes simplex, Herpetic keratitis, Anterior segment optical coherence tomography

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