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عنوان البحث:

## Characteristics of Trachomatous Corneal Opacity Using Anterior Segment Optical Coherence Tomography (OCT) and Pentacam

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**Purpose:** This study compared the corneal changes that occur in patients with trachoma between the anterior segment optical coherence tomography (AS-OCT) and Pentacam.

**Methods:** A cross-sectional study was conducted on 50 patients (100 eyes) with chronic trachoma who were presented to Fayoum University Hospital from February to August 2022. The study's objective was to examine the characteristics of trachomatous corneal opacity using anterior segment optical coherence tomography (OCT) and Pentacam.

**Results:** Comparison of corneal measurements between two devices revealed statistically significant differences. Pentacam consistently measured lower anterior corneal power than AS-OCT ( $p < 0.001$ ). Similarly, Pentacam consistently measured lower central and thinnest corneal thickness compared to AS-OCT ( $p < 0.001$ ). Although no statistically significant differences were found in posterior corneal power readings between the two. Patients with corneal opacity classified as CC3(severe central scarring), when imaged with Pentacam, were diagnosed with keratoconus.

**Conclusion:** AS-OCT and Pentacam devices exhibited inconsistencies in their measurements, particularly regarding anterior corneal power and thickness. the Pentacam demonstrated a greater ability to diagnose patients with dense corneal opacities with keratoconus.