PACHYMETRIC MAPS

Appearance of Pachymetric Maps in Eyes With Keratoconus

Eyes with keratoconus, or subclinical keratoconus, typically have thinner corneas than normal eyes. Keratoconic eyes also have a more progressive increase in corneal thickness from the center to the periphery. In other words, there is a more rapid increase in thickness when moving from the center to the periphery in eyes with keratoconus than

there is in normal eyes. Furthermore, the thinnest point of a keratoconic eye typically is inferior to the center of the cornea, which is known as inferior displacement. The pachymetric map on the Pentacam (OCULUS Optikgeräte GmbH) is useful to detect these differences in eyes with possible keratoconus.

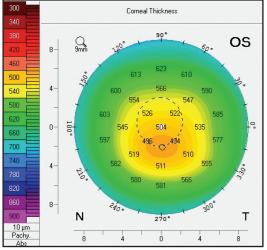


Figure 7-14. Example of a typical corneal thickness map with off-axis thinning, which is suspicious for early keratoconus.

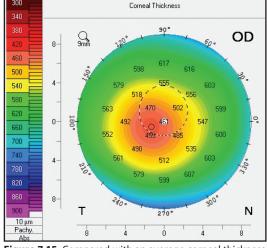


Figure 7-15. Compared with an average corneal thickness of 530 μ m, this corneal thickness map is unusually thin at 455 μ m.

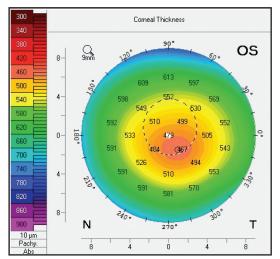


Figure 7-16. Example of corneal thinning, with mild inferior displacement.

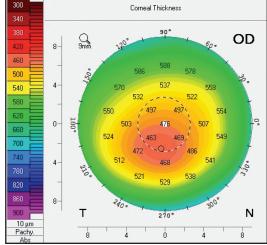


Figure 7-17. As can be detected from this pachymetric map, the rings showing the different thicknesses are also skewed into an oblong pattern, which is often associated with keratoconic corneas. The inferior displacement is also characteristic of keratoconus.