

Journal of Refractive Surgery Vol. 22 No. 2 February 2006

Manuel Ramírez, MD; Everardo Hernández-Quintela, MD, MSc; Valeria Sánchez-Huerta, MD; Ramón Naranjo-Tackman, MD

PURPOSE: To describe the morphological characteristics of microfolds that appear at the corneal flap after LASIK, as seen under confocal microscopy.

METHODS: Twenty-one eyes that had undergone LASIK were examined, all within 3 weeks to 1 month after surgery. A central scan of the total corneal thickness was obtained by using confocal microscopy in vivo. Confocal images were captured and digitized. The longitudinal orientation (vertical, horizontal, and oblique) and morphological characteristics of the microfolds were described and recorded.

RESULTS: Six eyes had folds at the central corneal flap, visible as linear distortions in the confocal images: one fold had a vertical orientation, two were horizontal, and three were oblique. The folds were visible from the epithelial basal cell layer to the stromal portion of the flap and were deeper than Bowman's layer.

CONCLUSIONS: Confocal microscopy allowed visualization of microfolds after LASIK. With the appropriate software, it is possible to analyze the morphological characteristics of these folds. Flap microfolds after LASIK are deeper than Bowman's layer.