

MALONEY VISION INSTITUTE CLINICAL UPDATE

INTRALASE FLAP COMPLICATION

INTRODUCTION

Some surgeons are marketing the Intralase microkeratome as a safer alternative for making the LASIK flap compared to a conventional microkeratome. The Intralase microkeratome works by creating thousands of microscopic YAG-laser explosions in the cornea and at a pre-defined depth. This "scores" the cornea, much like stamps were scored to make tearing easier before self-adhesive stamps were issued. At the completion of the laser scoring, it is still not possible to elevate the flap because thousands of pillars of stromal tissue tightly attach the flap to the stroma.

At this point the surgeon takes a blunt dissecting knife and manually dissects the flap free from the stromal bed. While the laser part of the procedure is quite safe, the manual dissection can cause complications, including flap tears. We present one such case here.

CASE PRESENTATION

A 45 year old female underwent LASIK with the Intralase microkeratome in May of 2003. After the right flap was scored by the Intralase laser, the surgeon attempted manual dissection of the flap. The dissecting knife perforated the flap, tearing the flap from the temporal hinge across to the nasal edge (photo #1). The remainder of the flap was dissected free and the laser treatment was done. Epithelial ingrowth developed postoperatively, melting a hole in the periphery of the flap (photo #2). The patient elected to abort the procedure in the other eye because of the flap tear.

COMMENT

The Intralase microkeratome has introduced an entirely new microkeratome complication: the flap tear. Proper management of flap tears is as yet undefined, but we recommend aborting the procedure and repositioning the corneal fragments in their original locations. Patients should be observed carefully for epithelial ingrowth, as this case illustrates, and treated aggressively when it occurs. This manual dissection is a necessary part of the Intralase procedure because the laser spots cannot be placed closely enough together to allow easy elevation of the flap. The manual dissection after the flap has been created with the Intralase microkeratome can compromise the safety of the procedure.

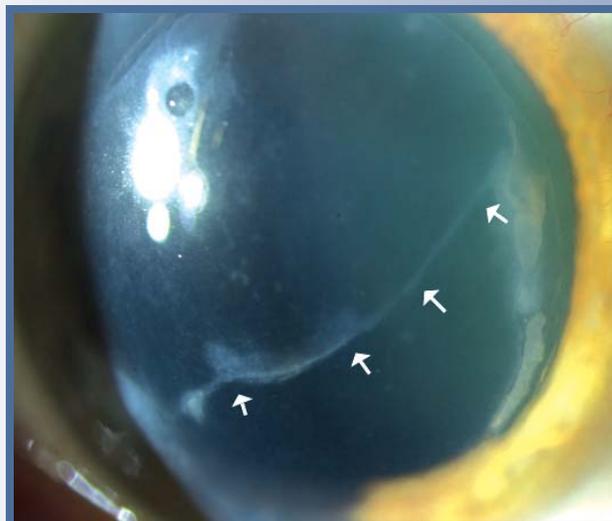


Figure 1: Manual dissection of the flap after Intralase laser treatment resulted in a flap tear from hinge to flap edge across the visual axis (arrows).



Figure 2: Epithelial ingrowth superiorly has caused a circular melt through the overlying flap (arrows).

If you have questions or need further information, please contact Dr. Robert Maloney at rm@maloneyvision.com or Dr. Farid Eghbali at dreghbali@maloneyvision.com. You can also call us at (310) 208-3937 or send a fax to (310) 208-0169.