



Refractive corrective surgery for highly myopic eyes

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Corneal refractive surgery had its origins in late 1970s. Professor Fyodorov in Moscow (1) encountered a young highly myopic patient who did not need corrective glasses after an accident where his broken glass-lens cut his cornea with multiple lacerations. That was transformed into ‘radial keratotomy’ (RK) and its variations. Everyone got onto this bandwagon and millions of eyes worldwide received ‘surgeon’s signature’ on their corneas in the form of almost full thickness ‘radial scars’.

As a young fellow with Dr. Lindstrom, I happened to compile the 10 years long-term results of RK published under the title Prospective Evaluation of Radial Keratotomy (PERK) study. These long-term results brought to light the fact that the initial dramatic results of RK (2) were nullified by the gradually corneal stromal scarring and patients were rather developing hyperopic changes (3). More alarming was the problems of irregular astigmatism developing in initially high myopic eyes because of post-RK keratectasia and thinned out corneas. Suddenly, RK was out of fashion, rather was abandoned in favor of excimer laser photorefractive keratectomy (PRK) (4). It had its high days but was not warmly welcomed by the patients who had to live with severe eye pain, lacrimation, photophobia and temporary worsening of vision till re-epithelialization of denuded corneal surface.

PRK was largely supplanted by newer operations, such as laser-assisted in-situ keratomileusis (LASIK), epithelial LASIK (Epi-LASIK), corneal inlays (5), and now femto-

second LASIK (FS-LASIK) and small incision lenticule extraction (SMILE) type procedures (6). Corneal thinning and irregular astigmatism induced by keratectasia are inbuilt complications of even these newer procedures. This article by He *et al.* (6) is an effort to address this problem of post-operative keratectasia by comparing the two procedures of SMILE and FS-LASIK. Complex statistical analyses presented in the form of tables and figures, though perfect for researchers are brain-twisting for the clinicians, are to support that the corneal stromal volume loss and changes were not different in the two procedures in high myopes. They have compared two procedures done on the contralateral eyes of the patients to eliminate bias or variations induced by the heterogeneity of the eyes of different patients. One year follow up logically sounds good to support the results and the conclusions, but it will be more meaningful to have longer-term follow-ups because, as said earlier, we have been burnt (3) before by the RK procedure.

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