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Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

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STELLINGEN

1. The current types of surgery for disorders of the anterior cornea are inadequate as many patients remain ineligible for the newer, less invasive therapies.
2. Bowman layer transplantation (BL) provides a safer alternative for patients with advanced keratoconus.
3. Visual rehabilitation following BL transplantation is secondary to the reduction of higher order visual aberrations.
4. Descemet membrane endothelial keratoplasty (DMEK) has superseded its predecessor, Descemet stripping endothelial keratoplasty (DSEK), as the procedure of choice for corneal endothelial disorders worldwide.
5. After a sharp decline in endothelial density immediately postoperatively after DMEK, the rate of decline nearly approximates that of non-surgical cases.
6. While phakic and pseudophakic patients seem to achieve the same average visual results after DMEK, the "extremes" of good vision are more commonly found in phakic eyes, suggesting an optical advantage in preserving the natural lens.
7. Because DSEK involves a stroma-stroma interface at the junction of donor and recipient tissues, the optical quality of the transplanted eye suffers. DMEK, because its graft lacks stroma, avoids this issue and is an acceptable secondary procedure for eyes with unsatisfactory visual results after DSEK.
8. In the immediate future, grafts for Bowman layer transplantation and DMEK will be refined. Increasingly, BL grafts will be prepared by automated means (for example, by femtosecond laser).
9. "Quarter-DMEK" in which only one-fourth of a conventional DMEK graft is transplanted may be on the near horizon.
10. Corneal transplantation will be overtaken by biological/medical treatment of corneal diseases.
11. The Dutch speak wonderful English; too wonderful, in fact, because it is a terrible blow to the ego to have your discourse rightfully corrected by someone who speaks the tongue as their second or third (or forth) language.
12. The Americans are, however, correct in their skepticism regarding bicycles as means of transport. Far better to be fat and happy in a warm car than skinny and sweating on a cold saddle.