

Transprk a no-touch Procedure to Refractive Surgery – Two Years Study

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Introduction

The TransPRK (Transepithelial Photo Refractive Keratectomy) by Amaris 750S a Schwind Technology is a refractive procedure with no-contact surgery. Corneal epithelium is removed by the laser without manual interference. It brings more accuracy and perfect deepithelization.

This innovative laser system delivers an unsurpassed Repetition rate of 1050 HZ and consequently an extremely short ablation time of just 1.3 seconds per dioptre. That means even greater safety and comfort for the patient. The risk of the cornea drying out is minimised, and the length of time the patient has to fixate on the green light is reduced.

The Smart Pulse technology uses a geometrical model based on a fullerene structure. Other, important instrument of security is the integrated contact free optical pachymetry that provides precision information about the thickness of the cornea throughout the entire duration of the treatment. The 7D eye impresses a apart from the linear movements (1st and 2nd dimensions). Compensations of the eye rotation around its optical axis.

Method

We treated and studied in two years 452 eyes of 224 patients, 96 males and 128 females. The average degrees of spherical refraction was -3.70 DE and cylindrical refraction was -0.75. We use 1% tetracaine hydrochloride as anesthesia and mitomycin-c 0,01% for 25 minutes or more. and contact lens after the application. Drops of moxifloxacin hydrochloride 0,5 for antibiotic therapy.

In the postoperative we use moxifloxacin hydrochloride 0,5 4 drops a day for 7 days, trometamol ceterolac 0,45% 4 drops a day for 7 days and carmellose sodium and sodium hyaluronate for 1 month.

Results

We had 96,3 % with 20/20 in the end of two eyes of study and 6 eyes presented a little manifestation of haze. 93% had epithelial regeneration in 3 days after surgery and all patients in 5 days. 96,3 % showed a spherical refraction target of 0,48 and a cylindrical refraction of 0.5 degrees. The corneal architectural structure becomes preserved and we have to pay attention when we have diameters

below 9.5 mm which may occur overcorrection in the results.

The results modified with a little between 12 to 24 months. The dry eye occurred in 72% of patients in the first month and kept with the same incidence of all population after 3 months of the surgery.

Conclusion

The TRANSPRK showed an excellent and safe procedure with 96,3% of good results of myopia and astigmatism. We need to observe the development of dry eye in the three months of post-operative [1-5].

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