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Titel des Beitrags: [Wavefront-guided and wavefront-optimised LASEK--comparison of clinical results]

Abstract:

PURPOSE: The aim of this study was to compare refractive outcomes and wavefront results in eyes undergoing wavefront-optimised and wavefront-guided LASEK. METHODS: In this contralateral eye study wavefront-guided LASEK and wavefront-optimised LASEK have been carried out on 30 eyes each. Preoperatively, 1 month, 3 months and 6 months after surgery a full ophthalmological examination was carried out. Preoperatively and 6 months postoperatively additional wavefront measurement have been carried out on all patients. RESULTS: The mean preoperative refraction in the wavefront-guided group was -4.41 D (SD 1.38 D) and in the wavefront-optimised group -4.62 D (SD 1.86 D). The postoperative refraction was very good in both groups (wavefront-guided -0.06 D, SD 0.18 D; wavefront-optimised -0.03 D, SD 0.21 D). In both groups RMS of higher orders were increased slightly (wavefront-guided from 0.26 to 0.31 microm, wavefront-optimised from 0.27 to 0.32 microm) and also spherical aberrations increased slightly (wavefront-guided from 0.18 to 0.23 microm, wavefront-optimised from 0.16 to 0.21 microm). CONCLUSIONS: The refractive results with the Concept System 500 in patients with preoperatively low amounts of higher order aberrations after wavefront-guided and wavefront-optimised LASEK are comparable. As good wavefront measurements need a lot of
experience and take a lot of time, there is no advantage of wavefront-guided ablation in patients with low preoperative aberrations.