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Xenia™ Lenticule For Management Of Keratoconus Or Post-Lasik Ectasia: Long Term Results

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Purpose: The management of keratoconus and post-LASIK ectasia can be challenging. Often these patients have poor unaided and aided vision; they are often spectacle & contact lens intolerance. We describe a form of SLAK using a XENIA™ Lenticule - a novel biocompatible corneal lenticule of highly purified corneal collagen fibres of porcine origin. Two years results of the first 12 patients treated with this technique are presented

Setting: All the patients were treated at Optimax Eye Clinics in England, United Kingdom. A single surgeon (1st author) treated all the twelve patients. Patients were recruited following referral from other Eye Centres; all patients were counselled, explained all other options and informed consenting form completed
Methods: A total of 12 eyes of 12 patients have undergone the procedure. 9 eyes with keratoconus and 3 with post-LASIK ectasia.. A custom corneal stromal pocket of 100 to 160µm depth and 8.7mm diameter was created with a 3.7 mm access port using an Intralase femtosecond laser. A 120µm thick (initial 6 patients, 80 microns thick for 3 patients and 45 microns thick Xenia for 3 patients), 7.2/8 mm diameter Gebauer™ lenticule was implanted into this stromal pocket though the 3.7 mm port. No sutures were used. Pre and post operative topography, pachymetry, intraocular pressures were recorded as well as aided, unaided and corrected vision
Results: Following implantation of the lenticule, average corneal thickness was increased from 401µm to 513µm. Average optical k readings were not statistically altered (51.4 D vs 51.5D). Anterior corneal astigmatism decreased from 7.4 D to 2.0D. Unaided vision improved from 1.74 LogMar to 1.54 LogMar
Conclusions: The XENIA Implant - two years results seems to be very promising in stabilising keratoconic and post-lasik ectasia eyes. With the 110 microns cohort, 3 patients developed cloudiness of the Xenia; 80 and 45 microns XENIA Implants seem to be equally effective and remained transparent. Epithelium off or on doesnt seems to make any differenceDeeper the femtosecond pocket, better the flattening of the postoperative keratometry values
What is your preferred presentation method?: Poster
Do you want to apply for a Trainee Bursary?: No
I confirm that at least one of the co-authors is an ophthalmologist: Yes
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