Reviewer's report

Title: Customized pachymetric guided epithelial debridement for corneal collagen cross linking

Version: 1 Date: 26 September 2008

Reviewer: Eberhard Spoerl

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Review to Customized pachymetric guided epithelial debridement for corneal collagen cross-linking

This is a good proposal for the treatment of thin corneas and an advantage to the transepithelial cross-linking. The application of the combination of the riboflavine solution with balanced salt solution (this has lower osmolarity than the cornea) gives the same results like the application of a hypoosmolar riboflavine solution.

The prevention of endothelial cell damage in the thinnest area may be the result of two effects. First, the remaining epithelium has a protective effect. Second, the application of riboflavine and balanced salt solution acts like hypoosmolar solution and cause a swelling of the cornea. Unfortunately, the thickness was not measured during CXL and the two different effects can not be seperated.

This two possibilities should be discussed.

There are some small changes.

1. Page 4, line 17: The company which produce the UVX-system version 1000 should be included.
2. What was the diameter of the irradiated area at the cornea?
3. Was the irradiation homogenous?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.