Reviewer’s report

Title: Contact Lens Rehabilitation following Repaired Corneal Perforations

Version: 1 Date: 27 July 2005

Reviewer: Christopher Wirbelauer

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Manuscript: Titiyal et al. “Contact lens rehabilitation following repaired corneal perforations”

Comments to the authors:

The authors of this paper present a well written clinical study on the functional rehabilitation after corneal perforations. In 44 eyes (40 patients) with a mean age of 16 years that had undergone surgical repair of corneal perforations in India they fitted rigid gas permeable contact lenses and compared the best corrected visual acuity (BCVA) with spectacle correction or with the use of contact lenses. The BCVA was significantly better with contact lenses than with spectacles. Thus, the authors correctly concluded that contact lens correction had significant advantages in patients after perforating injuries with an irregular cornea.

The following amendments are suggested:

- Page 2, Abstract: The mean values presented for BCVA in the results section are different than the values on page 6 (BCVA 0.1829 vs 0.2 and 0.5667 vs 0.58). Furthermore, the presented values should be reduced to two decimals.
- Page 2, Abstract: In the conclusion the authors describe “an irregular corneal topography”. However, an assessment with a corneal topographer was not performed in this study. Therefore it would be advisable to use only the term “irregular cornea”.
- Page 5, Methods: The authors fitted a contact lens in patients after perforating injuries of the cornea. The follow-up was 6 months, but it remains unclear at what time point the comparison of BCVA occurred. Therefore, the authors should more clearly specify when the comparison of the visual function was performed.
- Page 6, Statistical analysis: The authors describe that significant differences were tested. However, they used correlation tests, which allow the assessment of possible correlations, but not differences. In particular the differences between BCVA with contact lens or spectacles should be re-evaluated with appropriate test, e.g. the parametric T-test or the nonparametric Mann Whitney U-test.
- Page 7, Results: Comparative analysis revealed a significant correlation (r=0.83, p<0.01) between BCVA with contact lens and spectacle correction. Also the results in Table 1 (page 13) present the correlations of BCVA and corneal opacity or lens status. However, these results do present differences between the measurements, which should be re-evaluated as stated above. In fact, it is not surprising that there was a significant correlation between contact lens and spectacle correction, since the results of both corrections were dependent on the type of corneal opacity or the lens status. The evaluation of the differences in BCVA was not tested and should be included.
- Page 12, Figure 1: This figure does not add any further information and should be removed.
- Page 13, Table 1: The values for comparative analysis, including the analysis of the differences in BCVA, should be re-evaluated as suggested. The current comparative analysis gives only correlation values, which are not correct, as stated above.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes

Declaration of competing interests:
'I declare that I have no competing interests'