Reviewer's report

Title: Corneal melting after collagen cross-linking for Keratoconus. A case report.

Version: 2 Date: 29 October 2010

Reviewer: Naoko Kato

Which of the following best describes what type of case report this is?: Unreported or unusual side effects or adverse interactions involving medications

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: No

Does the case report have explanatory value?: No

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

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This case report describes a case with very important complication after corneal crosslinking. However, some description about the case and analysis for the data are missing.

I think every complications have causes. The clinician should make maximum effort to find it, even though it is not possible in all cases.

How was the refractive condition of the patient, and how was the rate of progression of the keratoconus prior to the surgery? The authors have done penetrating keratoplasty after corneal perforation occurred. How was the pathological findings of excised corneal button? Although the authors could not determine the definitive cause of complication, they should discuss pathogenesis...
from various perspective.

Major points;

1. I wonder if the corneal thickness was really 465 and 460 microns in this case. Did not the author measure the ultrasonic pachymetry before the procedure? Please show the real map of the videokeratography and Sheimpflug camera as figures. Also, please describe the precise manifest refraction and visual acuity (uncorrected and corrected) of the treated eye.

2. The information of Table 1 is unnecessary. We would like to know the most possible cause of this severe complication after crosslinking. Please show the results of pathological examination and photograph of the corneal sections if available.

3. In discussion, the authors state a lot about application and side effect of NSAIDs or anaphylaxis to riboflavin, however, both of these are highly unlikely as the cause, because they did not use NSAIDs for this case and no hypersensitivity for riboflavin was detected. So, the second and third paragraphs of the Discussion have no mean. instead, please discuss about the most possible cause of the complication.

4. Figure 1; the findings showing inflammation is hardly seen. This figure is discarded.

Minor points;

1. Introduction; line 3-4; "Eventually, about 20 % of keratoconus eyes require... " . Please add reference.

2. Introduction; line 7-8; "preliminary studies suggest that it is a rather safe technique." Please add reference.

3. Introduction; line 8-9; "In fact recent publications indicate that .... " Please add reference.

4. Case presentation; line 7-8; Please add the precise name Company, and City of Scheimpflug camera.

5. Case presentation; line 8-9; Please add the precise name of Company, and City video keratography device, .

6. Case presentation; third paragraphy; line 1; What is EIT?

**Quality of written English:** Needs some language corrections before being published

**Declaration of competing interests:**

I declare that I have no competing interests