Reviewer's report

Title: A probable mechanism of spontaneous closure of a traumatic macular hole: the role of autologous serum

Version: 1 Date: 20 December 2010

Reviewer: Ioannis Petropoulos

Which of the following best describes what type of case report this is?: New associations or variations in disease processes

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?: Yes

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?: No

Is the anonymity of the patient protected?: Yes

Comments to authors:

The authors present a case of spontaneous closure of traumatic macular hole in a 50-year-old female and propose a mechanism to explain this phenomenon. The case is interesting but not original, and the manuscript contains several errors.

1. Title: The title used for the manuscript is not appropriate. One case is not enough in order to propose a mechanism of spontaneous TMH closure. Also, the words “the role of autologous serum” cannot form part of the title either, since no autologous serum was used in the study. The only words appropriate for the title are those used by the authors as a second heading, that is “Spontaneous traumatic macular hole closure in a 50-year-old female”.
2. Abstract, line 3: “We report for the first time …”. As explained in comment no.4, this is not the first time that such a case is reported.

3. Abstract, conclusion: The entire conclusion of the abstract is speculative. These thoughts may be included in a paragraph of the Discussion (with the appropriate reference support), but the conclusion of the abstract must be based only on the findings of the case described.

4. Discussion, first paragraph: “Spontaneous TMH closure is common, but there are no published data in patients over 30s.” This statement is not true. Spontaneous closure of TMH has been previously reported in a 56-year-old woman (Menchini et al. Retina 2003;23:104-6).

5. Discussion, second paragraph: “Three mechanisms have been proposed for TMH resolution: cell proliferation at the TMH base, contractile epiretinal membrane formation resulting in TMH shrinkage and closure and foveal PVD resulting in the release of anteroposterior traction [4].” First of all, the reference used to support this statement is a case report, and the only probable mechanism for TMH closure that it mentions is “the bridging of the protruding retinal tissue over the macular hole”. Second, the three mechanisms mentioned above by the authors have been proposed to explain spontaneous closure of “idiopathic” macular hole, not “traumatic” one. And third, epiretinal membrane and/or foveal PVD are unlikely mechanisms of macular hole closure in young patients, who constitute the group of patients mostly affected by TMH.

6. Discussion, third paragraph: “The unique feature …”. As explained in comment no.4, this is not a “unique” feature of the presented case.

7. Discussion, third paragraph: “The serum beneficial effect may be due to the presence of growth factors (…) and cytokines”. A reference is needed here.

8. Discussion, third paragraph: “The serum beneficial effect ….”. There has been much controversy about whether such an effect exists. Autologous serum has been used in combination with vitrectomy, so the beneficial effect could be due to the vitrectomy. Besides, a randomized clinical trial on 185 eyes from Moorfields, with a two-year follow-up, comparing natural history, vitrectomy, and vitrectomy plus autologous serum for idiopathic full-thickness macular hole, found that the “use of autologous serum did not seem to affect anatomic or visual results”, concluding that “autologous serum application does not enhance the results of surgery (Ezra et al. Arch Ophthalmol 2004;122:224-236).

Quality of written English: Acceptable

Declaration of competing interests:

I declare that I have no competing interests.