Ocular injuries with a metallic foreign body in the posterior segment as a result of hammering: the visual outcome and prognostic factors

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PURPOSE
To evaluate the evolution of the best-corrected visual acuity (BCVA), to determine the prognostic factors, and to analyze the efficiency of the surgical procedures in the cases of ocular injuries caused by a metallic intraocular foreign body retained in the posterior segment as a result of hammering.

METHODS
A retrospective review of 64 consecutive patients was conducted at the Cantonal Hospital St Gallen over a 15-year period. The pre-, intra-, and postoperative clinical parameters were assessed. The statistics were performed using Fisher’s exact test and a multiple correspondence analysis.

RESULTS
The mean initial BCVA was 20/138 (standard deviation, 20/112). The mean ocular trauma score was 3.03 (standard deviation, 0.83). In all cases, the removal of the intraocular foreign body was performed within 24 hours after the injury. In 45 patients (70.3%), further operations were performed during the mean follow-up of 54.4 months (standard deviation, 22.7 months). The mean final BCVA was 20/39 (standard deviation, 20/55). In 53 patients (82.8%), the final BCVA was 20/40 or more. In 8 patients (12.5%), the final BCVA was 20/200 or less because of a direct macular lesion caused by the intraocular foreign body ($P < 0.001$).

CONCLUSION
Thanks to the improvement in the surgical procedures, the ocular injuries with a metallic intraocular foreign body in the posterior segment as a result of hammering have a good visual outcome unless the macula is involved.

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