

Comparison of External Magnet and Intraocular Forceps for Intravitreal Foreign Body Extraction (IVFB)

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Advantages:

The data from this study suggest no preference between external magnet and intraocular forceps for the extraction of magnetic intravitreal foreign bodies (IVFB). However, the use of external magnet for the extraction of IVFB may offer several advantages, including easier surgical handling and, as a result of decreased intraocular manipulation, the lower rate of giant retinal dialysis formation.

Methods:

This study was conducted on a consecutive series of patients undergoing vitrectomy, IVFB extraction, and other necessary vitreoretinal procedure. On the basis of the method of IVFB extraction, the eyes were categorized into 2 groups: group 1 (intraocular forceps extraction of IVFB [N=30 eyes]) and group 2 (external magnet extraction of IVFB [N=41 eyes]). Main outcome measures were: the rate of retinal break formation, the rate of development of retinal detachment (RD), and the change in visual acuity. Univariate and multivariate analysis of a number of potential prognostic factors were undertaken.

Effectiveness / Safety:

The overall rate of retinal break formation and development of RD was 41% and 7% respectively. There was no significant difference between the 2 methods of IVFB extraction in relation to retinal break formation (group 1, 43%; group 2, 7.3%). However, 3 cases of giant retinal dialysis occurred in group 1 ($p=0.021$). According to multivariate regression analysis, the factors predictive of poor visual outcome were the following: 1) longer duration between injury and FB extraction ($p=0.006$), 2) lower preoperative visual acuity ($p=0.02$), and 3) presence of afferent pupillary defect ($p=0.043$)