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INTRAOCULAR FOREIGN BODY REMOVAL WITH MINIMALLY INVASIVE, NON-VITRECTOMIZING VITREOUS SURGERY

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Introduction:

Nonvitrectomizing vitreous surgery has first been described in 2005, and rarely reported thereafter. Metallic IOFB removal without vitrectomy has already been described with help of internal or external magnet, but to our knowledge not yet with 23G forceps.
We describe the case of an intraocular foreign body (IOFB) removed with nonvitrectomizing vitreous surgery using a 27-gauge illumination source and 23-gauge retinal forceps.

Materials and methods:

This study is an observational case report, supported by video documentation of the surgical technique.

Results:

A 16-year-old boy presented to the emergency room of our Dept. after trauma at work in his right eye while using a hand grinding machine. Uncorrected visual acuity (UCVA) was 20/20 in the right eye and on slit-lamp examination a perilimbal corneal wound at 2 o'clock with an underlying basal iris hole, as well as trace cells in the anterior chamber could be observed. On fundus examination a relatively small, metallic IOFB could be seen in the inferonasal mid-vitreous with attached and unaffected retina in all quadrants. The IOFB showed a thin and elaborate shape, which in our evaluation made it unlikely to remove it with an external magnet through a small scleral incision. Our surgical approach included a three-port sclerotomy procedure, one inferonasal for a single 27-gauge chandelier endoillumination, the other two in supero-temporal and supero-nasal position, where two transconjunctival 23G cannulas were inserted. Two disposable 23-gauge retinal forceps with crocodile serrated tips were introduced into the vitreous chamber through the superior 23G cannulas. After several attempts the IOFB was firmly grabbed with the superonasal forceps, the sclerotomy was enlarged with a 23G trocar blade and the IOFB was fully extracted, together with the nasal cannula. Real dimensions of the IOFB turned out to be 1x2,5 mm. After 3 months follow-up the patient had 20/20 UCVA with a transparent crystalline lens, clear vitreous body and attached retina.

Conclusions:

In selected cases a metallic foreign body located in the vitreous chamber can be removed safely with a three-port sclerotomy approach, without performing vitrectomy. This minimally invasive technique may be particularly suitable in case of relatively small, flat IOFBs, affecting young patients, with more compact vitreous body.

Sources:

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