INTRA-OCULAR MAGNETIC AIR-GUN SHOT*

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Case Report

History.—A boy, aged 5, was accidentally shot in the left eye by an air-gun on the evening of February 3, 1954, and was admitted to hospital under the care of Mr. A. B. Nutt. The mother gave the information that the pellet was a round one and of light brown colour—probably brass. The gun had been brought over by her husband from Canada.

Examination

(i) *General.*—The child was in a state of shock, but well aware of his surroundings and answered questions intelligently. No difficulty whatever was experienced in examining the child.

FIG. 2.—Localization of magnetic air-gun shot in left eye.

FIG. 1.—Left eye, position of intra-ocular magnetic air-gun shot.

(ii) *Left Eye.*—There was a multiradiate (4) corneoscleral (limbal) wound 2 mm. across at 6 o'clock, with complete hyphaema. Blood was freely oozing from the wound, suggestive of intra-ocular haemorrhage.

There was a small iris prolapse, and a few tags of uveal tissue lying free in the lower conjunctival fornix. No view could be obtained of the fundus. The tension was soft and there was no perception of light (Fig. 1).

X-ray Localization.—A round foreign body 5×5×5 mm. was lying 1 mm. above the horizontal plane of the cornea, 21·5 mm. back from the centre of the cornea, and 1·5 mm. to the nasal side of the vertical plane (Fig. 2).

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As the eye was badly damaged, with no light perception, and since an eye with a retained foreign body is potentially dangerous, it was decided to excise it. Magnet extraction was not attempted, on the well-founded belief that air-gun pellets are made of lead, and are therefore non-magnetic.

The enucleated eye was sectioned with a knife, and a round, light brown shot weighing 350 mg. was recovered.

The shot was analysed in the Metallurgical Laboratory of the University of Sheffield, and reported to be made of steel, with a thin film of light brown paint, and therefore magnetic.

Comment.—Air-gun pellets vary in shape and size, and are usually made of non-magnetic lead. This one was made of steel, but it would not have been possible to save the eye, even if the shot had been extracted by magnet. Cases may well occur, however, in which the damage done is not so great, and quite apart from retaining the eye, useful vision may be achieved as a final result after extracting the pellet or shot by magnet. This is the first case of this nature encountered at this Hospital, and although various authors have described the extraction of lead shots and pellets, I could find no mention in the literature of an air-gun shot extracted by magnet (see Bibliography).

As cases of this nature are not uncommon, it is suggested that every case of air-gun pellet in the eye should first be tried on a magnet, especially if there is a chance of saving the eye.

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