Penetrating Wound of the Orbit

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On November 12th, 1956, at half past eleven p.m. a man aged about 20 was brought into the Groot Zieken Gasthuis in Bois-le-Duc. He had been sent by the general physician with the information by telephone that the patient had been wounded in the left eye with a knife, and that the knife had probably penetrated as far as the chiasm or even further. The general physician had fears for the patient's life. This fear did not seem unfounded. During examination the patient had a reasonable pulse and respiration, but, although quiet, was not communicable and slightly comatose. He had vomited a few times; it was evident that the patient had consumed alcoholics that evening.

An ordinary table-knife with a blade of 16 cm. (a second, identical specimen had been brought by the male nurses of the ambulance) had penetrated into the patient's left orbit as far as the handle. The handle rested on the inferior orbital margin and, judging from the position of the handle, the knife had penetrated medially, posteriorly and slightly downward. The eyeball was intact, judging from outer appearances, and the knife had pierced through the lower eyelid. The eyelids were markedly swollen, [here was slight chemosis of the bulbar conjunctivae and slight ocular proptosis. The pupillary reactions to light were normal in both eyes. The visual acuity could not be measured. As far as visible, the fundus did not show alterations. During transport, a considerable haemorrhage from the nose and mouth had stopped.

It seemed probable that the 16 cm. blade had perforated the base of the skull somewhere and penetrated into the cranial cavity. Considering this and in view of the fact that the left eyeball was intact, the patient was transported to the Neurosurgical Department of the St. Elisabeth Hospital in Tilburg, in agreement with Linzen of the Surgical Department.

The report on the anteroposterior and lateral photographs of the skull (Fig. 1 and 2). made at the X-ray Department at Tilburg (H. B. Goettsch and C. Puylaert) reads as follows:

"The knife is in the lower half of the left orbit, perforates the medial orbital wall and reaches the nasal cavity. From that place, the knife penetrates through the lateral wall of the right nasal duct into right middle cranial fossa, just over the petrous bone, where the end touches the right squama temporalis. The pineal gland is not displaced, which proves that there is no noticeable haematoma in the right middle cranial fossa." This latter remark was significant for the surgical intervention.

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Fig. 1. Fig. 2.

The operation report (de Grood) reads as follows: "The knife was removed under intratracheal anaesthesia. This required the application of a fair amount of force, but, of course, no jerking. We succeeded in removing the foreign body intact. The wound in the left eyelid was sutured." X-ray pictures made on the third post-operative day showed that the pineal gland was not shifted. The patient made a quick recovery, but on the 4th day developed epistaxis of such severity that ligation of the right external carotid artery was necessary. The EEG showed a right temporal focus.

17 days after the trauma, the patient was dismissed with only functional loss of the first branch of the right trigeminal nerve, and paralysis of the musculus rectus externus of the right eye. More than 5 months after the trauma, there was optimal visual acuity both left and right, and both eyeballs were normally mobile. The loss of function of the first branch of the right trigeminal nerve has persisted.

Flíeringa, H.J.: *Ophthalmologica* 135: 160 (1958)

Shortening of the Eyeball.

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