samples: this served as a control for the second test. (2) The titre of anti-B was 1:8 in the pre-transfusion sample, and 1:2 in the post-transfusion sample, indicating the absorption of large quantities of circulating anti-B on the transfused cells.

Histology.—The changes in the kidneys suggested a haemolytic reaction: the intertubular blood vessels were dilated and engorged with blood containing clumped masses of red blood cells; the tubular epithelium showed degenerate changes, and the lumina contained brownish granular material and pigment casts; there was oedema of the interstitial tissue. The sinusoids of the liver contained granular pigmented material and clumped red cells. The cerebral capillaries, mainly in the subcortical white matter, showed marked clumping of red cells, with amorphous granular deposits of haemoglobin. There were numerous small perivascular haemorrhages, the red cells in one instance being seen passing through a damaged capillary wall.

Dr. A. F. Ollerenshaw did the blood tests.

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Headaches Caused by Nasal Obstruction

The following case is unusual enough to be worthy of record.

CASE REPORT

A girl aged 18 was first seen in 1946, complaining of frequently recurring severe headaches, localized in the frontal area of the head above and behind the right eye. The headaches were so bad that she often had to stay home in bed, missing school two or three times a week. Inquiry revealed that there had never been any accident to the nose or head. When she was 11 two different ophthalmologists found her eyes to be normal.

On examination the nasal septum was found to be deflected to the right side, high up, causing pressure against the middle turbinate and obstruction in the upper part of the nose. It was thought that the headache was due to frontal sinus obstruction, and the patient was referred to an E.N.T. surgeon, who gave drops to put in the nose. These gave temporary relief and nothing further was done. An x-ray examination was not thought necessary.

The patient was referred to me again in April, 1951. During the intervening four years she had had frequent headaches, to cure which the tonsils and adenoids had been removed once, and the adenoids a second time. The headaches had become continuous day and night for the past six weeks, and had necessitated injections of "omnophon," in addition to codeine and phenacetin tablets, and various headache powders. In February, 1951, she again visited an ophthalmologist and had been fitted with glasses, which improved the eyesight but did not relieve the headaches.

FIG. 1.—Lateral view showing needle in position.

Recently the mother recollected an accident that occurred when the patient was 9 years old. While running down some steps at school she had run into a girl who was holding a knitting needle. Thereafter, her nose bled freely for a few hours. She was, however, able to return to school the next day. This story was dismissed as of no consequence, and as having no bearing on the headaches.

On examination some obstruction in the right side of the nose high up was again found. There was ptosis of the right eyelid. The blood pressure was 120/72. The urine, the cardiovascular and gastro-intestinal systems, and the reflexes were normal. Again a diagnosis of frontal sinus obstruction was made, but on this occasion she was sent for an x-ray examination of the skull. The result was indeed surprising. The radiologist's report was as follows: "A metallic foreign body, some 3 in. (7.5 cm.) in length, projects posteriorly and upwards with a slight lateral inclination from the right nostril. The point has penetrated the base of the skull and lies within the middle cranial fossa lateral to the sphenoid sinus. The ethmoid, sphenoid, and frontal sinuses appear normally translucent and show no evidence of infective change or other abnormality. Both maxillary antra are normal in appearance and no evidence of infection is seen" (Figs. 1 and 2). On clinical grounds it seemed most improbable that the needle was penetrating into the middle fossa and brain, but it was obvious that an operation had to be done at once, and the patient was admitted to hospital.

FIG. 2.—Radiograph showing position of needle and clear antra.

It was thought wise to give penicillin and streptomycin for 48 hours before operation, because of the possibility of a cerebral abscess forming and to prevent post-operative infection. The patient had constant headache and increasing ptosis of the right eye, and she was drowsy, lay curled up on her right side, would do nothing, took no interest in anything, and avoided the light. The leucocytes numbered 8,500, neutrophils 73%, monocytes 6%, lymphocytes 18%, eosinophils 2%, basophils 1%.

Under general anaesthesia the needle was removed through the nose. It was lying on the nasal plate of the maxilla, under the inferior turbinate, and was covered with a thin layer of bone, which had to be broken away before the end of the needle could be freed. When about 1 in. (2.5 cm.) of the needle was exposed it was grasped firmly with forceps and extracted. It was necessary to pull with some force before the needle—2½ in. (6.3 cm.) long—suddenly came away intact. A petroleum jelly and sulphonamide plug was placed in the nose and the patient returned to bed.

For four days headaches continued, but with periods of freedom. From the fifth day onward there were no further headaches. The penicillin and streptomycin were continued up to the tenth day, when the patient was so well that she was discharged from hospital, with the wound in the nose soundly healed. She has since then been completely free of headache, and feels better than she has done for years. The mother states that her outlook on life and disposition have greatly improved.

I wish to thank Dr. E. R. Hafner, under whose care the patient had recently come, for permission to publish this case.

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