NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS.

COMPOUND FRACTURE OF RIGHT RADIUS AND ULNA; AMPUTATION; HÆMORRHAGE; ARREST; RECOVERY.

(Under the care of Dr. STARK.)

THE occurrence of hæmorrhage in the following case—for the notes of which we are indebted to Mr. H. B. Vincent, house-surgeon—does not appear to have been in any way connected with the employment of Esmarch's bandage, but seems to have been due to the small degree of coagulability of the blood. Ligatures were applied in vain to the bleeding points; but the application of the perchloride of iron at once arrested the oozing of blood.

James N—, aged thirty-three, was brought into the hospital on Sept. 11th suffering from a compound fracture of the right radius in the middle third, and of the ulna immediately above the wrist-joint, together with severe laceration and contusion of all the soft parts on both aspects of the forearm. The main vessels and the nerves of the forearm were not injured, as was seen on examination after removal. The arm was amputated in the lower third. Esmarch's bandages were applied, a good number of vessels were ligatured, and in every other respect the operation was normal and almost entirely bloodless. *En passant* it may be mentioned that the man had only recovered from an attack of typhoid fever about three weeks. The accident was caused by the fall from a considerable height of some iron débris. About an hour after the operation there appeared to be more staining of the dressings than usual; the stump was elevated, and cold applied. As this, after a trial of more than one hour, proved of no avail, the dressings were removed, when the flaps were found very tense. Hæmorrhage was going on so rapidly that further temporising would not be safe. Accordingly the patient was again put under the influence of chloroform, and the house-surgeon proceeded to open up the stump and to turn out a large quantity of fluid blood, and to tie what seemed to be bleeding points (there were already as many ligatures as there were normal arteries in the part), but still the surface continued to ooze freely. As the effused blood showed no signs of coagulating, both flaps were sponged with the tincture of perchloride of iron, which effectually stopped the hæmorrhage. The flaps, coated with iron, were then brought into apposition with strapping. In two hours' time all bleeding ceased. There was no sickness after the chloroform. A quarter of a grain of morphia was injected into the arm; and, as it did not cause sleep, another quarter of a grain was injected. Temperature 100°; pulse 64.

Sept. 10th.—No more bleeding; slept well; bowels not open; tongue furred. Has taken beef-tea and milk. Complaints of burning pain in stump.—10 A.M.: Pulse 90; temperature 101·8°.—6.30 P.M.: Pulse 84; temperature 101°. Ordered to take five minims of the tincture of the perchloride of iron every two hours. Injected a quarter of a grain of morphia.

13th.—10.30 A.M.: Slept well; takes nourishment well; tongue very furred; bowels not opened; stump looks well, suppurating; a great quantity of the iron salt removed; complains of pain in the axilla. Pulse 80; temperature 100°. Ordered brandy and seltzer-water.—2 P.M.: Pulse 96; temperature 101·8°.—6.30 P.M.: Pulse 96; temperature 100°. During the day he complained of pain in his right hypochondrium. The pain was removed by warm flannels. A quarter of a grain of morphia injected subcutaneously at bedtime.

14th.—10.30 A.M.: Has slept well; not much pain in stump; bowels not open; tongue very furred; takes his food well. Pulse 84; temperature 100·6°. Stump suppurating freely; nearly all the iron has come away; no enlarged glands in his axilla. Up to the present time he has gone on well, his temperature remaining the same, and his pulse still slow.

22nd.—All the ligatures have come away, with the exception of the one upon the brachial. The end of the bone is entirely covered in, and the two flaps are uniting by healthy granulating surfaces. He takes his food well, and is able to walk about. Pulse 84; temperature 99·2°.

The patient has continued to progress satisfactorily.

BRISTOL ROYAL INFIRMARY.

ANTISEPTIC LIGATURE OF THE EXTERNAL ILIAC.

(Under the care of Mr. TIBBITS.)

THE following case is a valuable contribution to antiseptic surgery.

Wm. J—, aged twenty-seven, by occupation a fireman at a colliery, was admitted on August 22nd. Three weeks before his admission he first felt pain at the upper part of his right thigh, and noticed a small swelling, which has steadily increased in size.

On admission, a tumour about the size of a small orange occupied the apex of Scarpa's triangle. Extensile pulsation and a bruit were well marked. General state of health good, and no evidence of any further arterial disease.

Aug. 23rd.—A horseshoe tourniquet was applied for some hours to the femoral artery above the tumour.

24th.—Tourniquet applied at intervals for three hours. Patient says that he fancies the tumour does not beat so hard, and that it feels more solid. He keeps his finger pressed on the femoral when the tourniquet is not applied, or when it is loose.

25th.—Tourniquet applied for two hours. Patient complains of great pain in tumour and in the limb. Ordered a subcutaneous injection of the third of a grain of morphia.

For the next few days pain was a marked symptom. It was rarely possible to keep up instrumental compression for more than a quarter of an hour, but the patient was most persevering in his endeavour to command the artery by digital pressure.

Sept. 6th.—Tumour much harder, but increased in size. Pulsation hardly perceptible to the hand. Complaints of constant pain around tumour, and shooting down the leg to the inner ankle.

8th.—Tumour larger, especially on its outer side, extending upwards under the rectus muscle. Pulsation ill-defined; bruit marked; pain in limb increased. Temperature 100°; pulse 115. Tongue foul.

9th.—Swelling greatly increased, and diffused over the thighs. No pulsation to be felt in the arteries of the foot. Pain in limb excessive. Temperature 101·3°; pulse 130; tongue dry and brown.—1.30 P.M.: The external iliac was ligatured with a double thickness of carbolised catgut (prepared at the Apothecaries' Hall, Glasgow). All the sponges used were wrung out in a solution of one part of carbolic acid in a hundred parts of distilled water. The wound was brought together with horsehair sutures, and sealed up with a small piece of lint soaked in a solution of carbolic acid and tincture of benzoin, in the proportion of one to fifteen. A pad of carbolised tow was placed over this, and the limb then wrapped up carefully in a thick layer of cotton wool.

10th.—1 P.M.: Has had no pain since the operation. Temperature 99·2°; pulse 98; tongue cleaning.

11th.—Temperature 99°; pulse 80; tongue clean. No pain either in wound or limb. The patient is anxious to eat a substantial dinner. The pad of carbolised tow over the wound removed. Strip of lint left adherent, and covered with two thicknesses of lint soaked in a solution of carbolic acid and glycerine, one in fifteen.

17th.—Strip of lint adherent to wound taken off, and horsehair sutures removed. Wound perfectly healed; not the slightest sign of any discharge.

29th.—Tumour smaller and more defined, but still about the size of a foetal head. No pain in limb. Appetite good, and general condition satisfactory.

Remarks.—Under compression, this patient at first seemed to progress favourably. He was very anxious to assist, as far as possible, in carrying out the treatment, but after the first few days it was only in combination with hypodermic injection of morphia that pressure of any sort could be borne. The rapid increase in the size of the tumour, the diminished pulsation, the great pain in the limb, and the severe constitutional disturbance, point strongly to the belief that the aneurism had ruptured about forty-eight hours before the artery was ligatured. Unpromising as the case was at the time of the operation, the subsequent progress was most satisfactory. When the parts were examined on the second day, it was evident that the wound had healed by the first intention. Thus, one source of anxiety was removed, and, whatever may be the ultimate result of the case, as regards