original possessors of the soil. In fact, they had all the qualities of a domineering, not to say dominant, race, and the features of their kings and lords, as handed down to us by their stony effigies, show many of the characters of the mesocephalic long-head. This, then, was the race who first evolved from the recesses of their brains how to lead an easy life by militarism and "kultur."

## THE EARLY TREATMENT OF PROJECTILE WOUNDS BY EXCISION OF THE DAMAGED TISSUES.

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After eight months of experience of the early treatment of projectile wounds I have had ample opportunity of critically observing the values of the various antiseptics in their various strengths and also the many details of treatment of recent wounds. I desire, therefore, to place on record a method of treatment which has given most gratifying results, and which, if practised thoroughly, will materially lessen the time a wounded man is absent from the firing line.

In a modern projectile wound we have to deal with a varying amount of devitalized tissue and a varying amount of ingrained infected material, both of which are always present. The devitalized tissue varies in different wounds from a microscopical amount, through all quantities, to the gross obvious slough. The ingrained infected material is inseparably fixed to this devitalized tissue, and nothing short of the complete removal of the tissue can possibly get rid of the infected matter. Cleansing measures are placed at a great disadvantage, for only those organisms which are spread loosely broadcast on the surfaces can be removed or inhibited in growth by antiseptics. The more important natural protective powers of the healthy body in which these wounds occur are also placed at a great disadvantage, for no vigorous opposition can be offered by devitalized tissue, and the healthy tissue is separated from the loosely scattered infected material on the surface of the wound by the layer of devitalized tissue bounding the wound, and this tissue also acts as a perfect culture medium.

### *The Method.*

This consists in the extirpation of the devitalized tissues. An anaesthetic is given where indicated:

Local anaesthesia by novocain and adrenalin 2½ per cent.
Short anaesthesia by open ethyl chloride method.
Long anaesthesia by ether or chloroform.

*The wound of the skin* is boldly cut out with a sharp scalpel. It should be so completely removed that a clean healthy incised wound replaces the contused and infected wound made by the projectile. There should be nothing of the old wound remaining.

*The wound of the superficial and deep fascia* should be treated in the same way.

*The wound of the muscle* is dealt with in the same fashion. It presents, however, more difficulties because of the retraction of severed fibres, and because of the distance of the depths of the wound from the surface of the body. This latter difficulty can be happily overcome in many cases by making larger incisions.

Removal of loose and fixed bits of obvious foreign and dead matter is, of course, essential. Ample exposure and drainage of the wound is necessary, and those wounds which are too extensive after the above treatment to retain a drainage tube do better than those in which a tube is necessary on account of their depth and narrowness. By this procedure the wound is put in the best possible conditions for the bactericidal actions of the tissues and the outpoured lymph. It is important to remark that it is not wise to impair the resisting and offensive powers of the artificially obtained healthy tissue surfaces by the use of strong or injurious antiseptics.

### *Results.*

This method, when combined with the surgical essentials of perfect rest, cleanliness, and frequent suitable dressings, has resulted in the healing of projectile wounds, without any appearance of pus in wounds of the skin and of the superficial fascia. In many wounds of muscle and bone, also, this gratifying result has been attained. In the treatment of some wounds of bone and muscle anatomical problems have prevented these principles of treatment from being thoroughly carried out, so that the results have not been as good. There have been no cases of generalized blood infection, nor of any spreading infection in the neighbourhood of the wound.

## NON-TUBERCULOUS HIP DISEASE SUCCESSFULLY TREATED BY DOUBLE SPLINT AND OVER-ABDUCTION.

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The case which was subjected to the treatment below described was sent to Liverpool by Dr. Sugden of Ramsey, Isle of Man. The illustrations are admirably drawn from photographs.

A girl, aged 6, was admitted into the Liverpool Royal Infirmary on June 8th, 1903. The left hip was disabled, swollen, and tender, but gave no pain as long as she lay quiet in bed. The condition started with pain nine months previously, and she had been lame for six months. The pelvis was strongly arched and tilted to the left, and the limb abducted and rotated outwards. There was a conspicuous feature on manipulation—an extraordinary looseness of the hip-joint whereby the left thigh could be adducted so as to lie at right angles across the right. She was measured for a double Thomas's hip-splint as modified by Robert Jones, with extra abduction on the affected side and the ends prolonged, as shown in Fig. 1. This was applied, under chloroform, on June 18th,

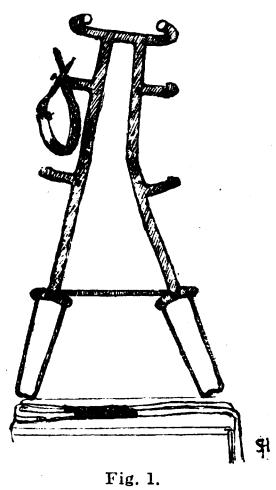

Fig. 1.

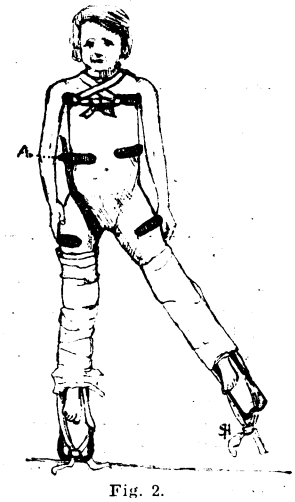

Fig. 2.

Fig. 1.—Double hip splint, with extra abduction on left side. Leather perineal band for sound side attached to stud on loin crescent. (See also Fig. 2.)

Fig. 2.—Child erect in splint. Front view, showing bandage slinging it to neck. A, Stud to which strap is fixed.

1903, both lower limbs being thickly surrounded with rolls of cotton wadding and bandaged to the splint. To prevent shifting, each leg was previously prepared with two strips of bandage stuck on with doubled adhesive plaster fixed under a roller bandage, and tied to the ends of the splint beyond the feet. For counter-extension a perineal band covered with basil leather was looped on the sound side, and its ends—leather straps pierced with holes—were buttoned on a couple of metal studs attached to the splint, as shown in Figs. 1 and 2. Between the patient's back and the bars of the splint was a flat pad covered with basil leather. Fig. 3 shows also the portability of the patient in her splint, without fear of displacement or interruption of the fixed and comfortable mechanical treatment. She could, whenever tired of lying on her back, be turned over so as to lie on her face. The invariable tendency to "adduction deformity" on recovery from severe hip disease is thus counteracted by "over abduction" at first, the result being eventual return to the straight position.

Some pain was naturally inflicted by the forced adoption of this attitude, but quickly subsided under the fixed rigidity of the splint. Still the evening temperature, though sometimes returning to normal, generally oscillated in the first few weeks between 100° and 102° F. The front of the joint became puffy, and after seven weeks fluid elasticity could be felt. On

August 7th an aspirator was used, and six drachms of sanious serum with flakes drawn off. This was repeated on August 11th, when two drachms of creamy pus were drawn off. Bacteriological examination revealed staphylococci only. No

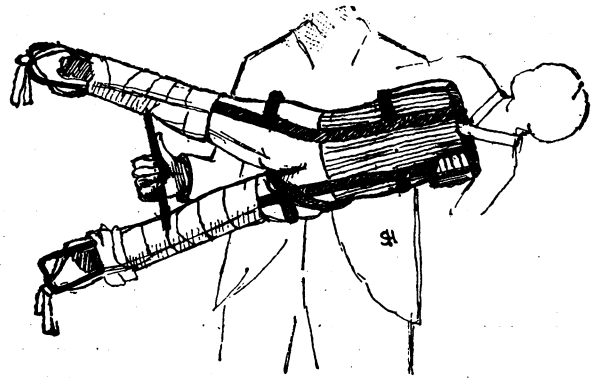

Fig. 3.—Back view, showing also portability of child in splint, and flat leather-covered pad behind whole of trunk, and sling over shoulders.

further interference of this kind was required, and the swelling at the joint went down; but the temperature still varied from 101° to 102°. Possibly the child was over-fed. She was sent on September 14th, still fixed in the double splint, to the Children's Convalescent Home in West Kirby, Cheshire, where photographs of her were taken for me by a friend on September 27th, 1903. While at the convalescent home she occasionally had a temperature of 103° F., with abdominal pain; so on December 29th she was brought back to the Liverpool Royal Infirmary. Her diet was cut down; a few simple enemas were given, and afterwards cod-liver oil and maltine prescribed. No further trouble occurred. The double splint was kept on from June 18th, 1903, to April 19th, 1904, when a single Thomas's splint for the left hip was applied. She remained in hospital till August 6th, and then went home to the Isle of Man. Four days later she became very ill, brought up half a teacupful of blood, and remained in a critical state for nine days, but rapidly improved after being wheeled out daily in the open air. Later a thick sole and heel were fixed to the right boot, as she could not use the elevated iron patten provided for her. She was now able to stump about on the sound leg with the aid of crutches, the other leg hanging safely in the splint. She left off both splint and crutches in June, 1905. Her father wrote in February, 1914, giving some of the above details, and saying that she was then in good health, walking well in ordinary boots, but with a slight limp, though without pain or inconvenience at the hip. In June, 1914, he sent a photograph taken at the time, showing her as a comely young woman.

*Remarks.*—This patient on admission had no appearance of the delicacy suggestive of a tuberculous tendency, but when the pus drawn from the hip was found to contain only staphylococci, and the abscess resolved, after two aspirations, it seemed certain that no tubercle was there, and that the disease had originated in a small osteomyelitis of the head of the femur. The extraordinary looseness was a condition that I had only observed in one other case, and described in a lecture "On Acute Osteomyelitis as a Cause of Hip-joint Disease," given at the Medical Graduates' College and Polyclinic in London on February 26th, 1902, and reported in the *Clinical Journal* of June 16th the same year. At the Belfast meeting of the Association, 1909, I had in mind the case here illustrated, when I remarked as follows:[1] "In more recent years, while looking back upon some of these most successful cases, it gradually dawned upon me that such abscesses, which could often be recognized as beginning in bone disease, especially of the epiphyses, might probably not be tuberculous at all; and that spontaneous 'recovery' not only of joint cases but also of Pott's disease of the spine, where health and strength remained but deformity also persisted, lent probability to the supposition. The question could only be settled by bacteriological examination of pus, when present, if freshly withdrawn under antiseptic precautions. Then the discovery of staphylococci as the sole organisms left no option but to conclude that periostitis, ostitis, or osteomyelitis of a non-tuberculous kind, lay at the root of the malady. I can only advise the systematic continuance of such investigation wherever practicable, as a means of some day ascertaining the relative proportions of these pathological varieties. Instead, therefore, of assuming a tuberculous origin for so many joint cases not otherwise obviously explained, but not submitted to a tuberculin test, it is probably correct to assume that a good proportion are not tuberculous at all, and on that account alone may be more hopefully treated."

REFERENCE.

[1] Debate on Treatment of Tuberculous Disease of Joints, BRITISH MEDICAL JOURNAL, vol. ii, 1909, p. 955.

# A CASE OF CONCEALED ACCIDENTAL HAEMORRHAGE: SPONTANEOUS DELIVERY: RECOVERY.

BY

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CASES of concealed accidental haemorrhage being somewhat rare, and a case terminating spontaneously in favour of the mother being still more rare, a few notes on the following case may prove of some interest:

Mrs. P., aged 36, 2-para, first child 4 years old; now eight months pregnant; rather spare in build, somewhat delicate, and had suffered from a bad attack of diphtheria in the third month. On May 2nd, 1914, the patient had been engaged in spring cleaning, and during the forenoon was suddenly seized, while washing the floor, with a severe pain in the abdomen, which made her feel giddy and sick. She lay down in bed and took some brandy. The acute pain gradually passed away, but left a feeling of tenderness over the abdomen. When the pain came on she felt very strong fetal movements, which she said made the pain worse, and the sickness more intense; but these movements soon stopped, and were never felt again. During the afternoon she returned to her housework, and felt little inconvenience until about 10 p.m., when the severe pain returned, accompanied by sickness and vomiting. I was sent for, and found the patient apparently suffering from severe colicky pains, very sick, pulse 90, rather small but quite steady and regular, and temperature 99°. There was no marked abdominal tenderness. The abdominal wall was fairly lax, the uterus about the size normal in an eight months pregnancy, and the fetal parts quite distinguishable, back to front, and head in position of L.O.A. There were no movements, and the heart sounds were inaudible. There were no signs of labour, and the cervix was unexpanded. As the patient had indulged in a hearty supper of chipped potatoes and fried fish, and, not being told of the attack in the earlier part of the day, I imagined that the pains were due to acute indigestion with colic. I prescribed 3 grains of calomel, followed later by a dose of Henry's solution, and ordered hot fomentations over the abdomen. The medicine acted well, and the fomentations gave her sufficient relief to enable her to get some snatches of sleep. Next morning (May 3rd), the pain returned, and when seen about 9 a.m. I found the patient's appearance quite altered. She had an anxious expression, cold extremities, great tenderness over the abdomen, which she could hardly bear to be touched, and some rigidity over the abdominal wall; she also complained of faintness and pain on passing water. Pulse 110, temperature 97°. Nothing could be made out per vaginam, and there was no sign of labour, all the pain being situated low down in front on the right side. There was no special tenderness over McBurney's point. Hot fomentations were again applied over the abdomen, and a hot rectal injection of two pints of saline solution given, which afforded some relief for an hour or two. About 2 p.m., however, the pain became very severe, the abdomen extremely tender and rigid, and the uterus much enlarged and prominent, particularly in the neighbourhood of the ensiform cartilage. The patient complained of intense thirst, was very restless, looked pallid and anxious, and showed all the signs of internal haemorrhage. Pulse 130, very small at the wrist, but still quite regular; temperature not quite 97°, and respirations 40. There was still no sign of labour, no show of any kind, cervix quite normal, but examination very painful. Concealed accidental haemorrhage was diagnosed. A binder was put tightly round the abdomen, but had to be taken off as the patient could not bear it. Pituitary extract was given hypodermically, and ice applied to the abdomen. In consultation with my assistant the question of emptying the uterus per *accouchement forcé* was considered. Rupturing the membranes was thought too risky, and Caesarean section with hysterectomy was, for very potent reasons, out of the question; but as the patient was a weakly woman to begin with, and was now suffering intensely from the loss of blood internally, I feared interference might prove fatal. At the same time it appeared to me to be as critical to leave things as they were, so I decided upon rapid dilatation (Bossi), and, if necessary, multiple incision of the cervix (Duhrssen) and emptying the uterus. The patient was left at 4.30 p.m., with the understanding that the operation was to take place at 6 o'clock. I was sent for in haste about 5.30, and on arrival I was shown a stillborn fetus—a basinful of dark blood and three large black blood clots about the size of a normal placenta. The woman lay on the floor, and a fairly smart haemorrhage was going on. A short time after I had left in the afternoon the patient had an intense desire to stool, got up, and passed a little flatus. She was no sooner in bed than the desire returned. She got up again, and the woman in attendance states that she seemed to give one big strain, when the