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 maling 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, osteitis, 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 (Dührssen) 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

baby was born in the chamber vessel. The placenta was expressed with some difficulty fifteen minutes afterwards, but came away quite intact. I had a good deal of trouble in stopping the haemorrhage after the placenta came away, for I could easily get hold of the uterus and make it contract, but it seemed to have very little retracting power, and filled with blood as soon as it was left. A hot continuous intrauterine douche was administered, ergot and strychnine given hypodermically, and the uterus held firmly for nearly one and a half hours before it was safe to leave it. From then onwards, however, there was no further haemorrhage of any note. Two pints of saline solution were given intravenously and pills of ergotin, quinine, and strychnine prescribed. The case ran a nearly normal course except for a slight rise of temperature to 100° during the first two days, probably reactionary and due to the extremely anaemic condition of the patient. The pulse, which immediately after the confinement was hardly perceptible at the wrist, was at 10 o'clock that night 110 and fairly full and strong.

The stillborn fetus, a female of the eighth month in development, weighed 5½ lb., and appeared quite normal and healthy. It had probably died the day before delivery, after the convulsive movements the mother had mentioned. The placenta was quite normal in every respect, but from the dark blood clots still adherent to it it appeared to have been separated from its uterine attachment over half of its surface; otherwise it presented no unusual features.

The points of interest in this case appear to me to be: First, the spontaneous emptying of the uterus without any previous signs of labour—an event which probably saved the patient's life. The loss of blood had in all likelihood so far reduced the general blood pressure, that what was left of the contracting power of the uterus was able to prevent further dilatation and to stop the haemorrhage, which had probably become feeble *in utero*, this action no doubt being stimulated by the pituitary extract. Why the labour should end so precipitately I can offer no opinion, unless it was again due to the action of the pituitary extract. The second feature of interest was the fact that I was able to get the uterus to contract and finally to retract so as to stop the haemorrhage. It is usually considered that in cases of concealed accidental haemorrhage the uterine muscle is so diseased as to have lost the power of contracting and retracting. The practically uninterrupted recovery of a patient who was so near to death must be rare. As to the predisposing cause of the haemorrhage, was the uterine muscle attenuated as a result of the attack of diphtheria, or was the nervous mechanism poisoned and stimulus interrupted by that malady? And, if so, why was the uterus able to contract sufficiently to expel the fetus and to remain contracted later? I may add that the urine was quite normal in quantity, acid reaction, specific gravity 1020, and at no time contained any abnormal constituents.

TECHNIQUE OF ANALGESIA IN INTRANASAL SURGERY.

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RECENT discoveries have so modified the indications for general anaesthesia in intranasal surgery that, granted ordinary self-control by the patient and delicate handling by the surgeon, the discomforts and dangers of efficient analgesia are considered less than those of general anaesthesia. The only intranasal operation really unsuitable for local analgesia is the frontal sinus obliteration.

I have found the technique about to be described highly satisfactory in operations upon the turbinal bones and nasal septum; indeed, a patient who has slept through the greater part of the operation may be able, with a little assistance, to walk back to bed. The employment of chloroform (without admixture with ether), injections of cocaine and adrenalin, alone or in combination, and post-operative packing with adrenalin are absolutely unjustifiable in operations on the nose, and will sooner or later lead to catastrophe. Moreover, with or without the use of a general anaesthetic, the injections of cocaine and adrenalin lead to marked excitability, difficulty of breathing in the recumbent posture, and excruciating headache (through adrenalin vasomotor stimulation), with the need of constant administration of hot coffee and aromatic spirits of ammonia. The confidence of the patient is lost and the operation is rendered more difficult.

One hour before the commencement of the operation a

hypodermic injection of ½ grain of morphine with 1½ grain of atropine sulphate should be given and the nasal passages packed with gauze soaked in equal parts of 10 per cent. cocaine and adrenalin. This should be done with reflected light, so that narrow strips can in most cases be passed behind a marked deviation. The patient should be allowed to remain as quiet as possible for thirty minutes, when he is transferred to the operating table and the gauze strips are removed, a small portion of cotton-wool being inserted far back in each nostril to soak up any overflow from the following infiltration of urea-hydrochloride-quinine solution. In the case of an operation upon the nasal septum three points for injection will suffice on each side; these points are at the angles of a triangle with the base corresponding to the junction of mucosa and skin just behind the anterior nares and the apex over the vomer, its exact position being dependent upon the area infiltrated by the two injections in front. If the inferior turbinates are to be removed two injections will suffice on each side, one just behind the anterior extremity and the other at the junction of the middle and posterior thirds. The syringe employed should be all metal and the needle of the finest aperture procurable with bevelled tip without point. Dental needles are most convenient. The solution employed should be 1 per cent. quinine-urea-hydrochloride, and the amount injected should not be stinted. The nose is again packed with gauze wrung out of the cocaine-adrenalin solution, and in about twenty-five minutes the operation is commenced.

The haemostasis is perfect, and the analgesia is so thorough as to be truly anaesthesia, even the tactile sensibility being in most cases destroyed. There is but little emotional distress, and I have known patients, on being told to close the eyes and sleep, who have done so, and snored away during the entire operation, the only disability being that the head has had to be steadied by an assistant. The analgesia persists as a rule for about eight to twelve hours. I have not met any instance in which it has lasted several days, as claimed by other observers. There is no after-sickness, and the patient is free to go about his business in about twenty-four hours. In consequence of the exudation caused by the quinine-urea solution, there is some after-swelling, but this seems to minimize the possibilities of post-operative oozing.

It is quite possible to drain and explore the antrum of Highmore by this method, as is the routine practice of many American surgeons, but time is required before the advantages of efficient analgesia are fully appreciated in this country. It is safe to predict that the future will see further rapid progress as new chemical discoveries of non-toxic anaesthetics are announced.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF CEREBRO-SPINAL MENINGITIS.

C. W., aged 23, a driver A.S.C., was removed on April 9th to the Red Cross Hospital, Trent Vale, and from there, on April 10th, to the Bucknall Isolation Hospital. At the onset there was nausea, with violent headache and retraction of the head, and the temperature rose to 103° F. When admitted into the isolation hospital he was quite unconscious, with the head greatly retracted and the back curved; there was slight squint, increased reflexes, Kernig's sign, on the left buttock a patch of spots, and on the lips a well-marked patch of herpes. The pupils were inactive and contracted, *tache cérébrale* very marked; the urine was passed freely, and contained no albumin. During the second day incontinence of urine and faeces set in, and continued during the illness. Lumbar puncture was performed on April 10th with Barker's needle. Lumbar fluid was sent to the Health Laboratory, Manchester, for examination, and was said to contain *Meningococcus intracellularis*. The jaws were so clenched that it was impossible to obtain a swab from the throat. Soamin was given intramuscularly in 6-gram doses daily, until 100 grams had been given. Lumbar puncture was made every four days (six times altogether); 30 to 60 c.cm. of fluid was removed each time, and 15 c.cm. of antimeningococcus given after the withdrawal of fluid on each occasion until 75 c.cm. had been given. The puncture was made each time that