valuable auxiliaries in cases of marked prostration. Moistening the skin and allowing free evaporation not only favours the radiation of heat, but is also extremely grateful to febrile patients. I have adopted the combined plan with decided advantage.

I have more than once stated, at the Obstetrical Society and elsewhere, that quinine appears to exert much less influence over hyperpyrexia of ichorrhæmic origin than over that associated with, if indeed it be not dependent upon, suppuration; and I would venture to suggest the probability that the ichorrhæmic cases which show the highest temperatures and are the most rapidly fatal may be more favourably influenced, if not entirely controlled, by the assiduous application of cold than by the administration of quinine, valuable as that drug doubtless is in other cases. The brilliant results which have attended the administration of salicylic acid and its salts in acute rheumatism, usually a non-suppurative disease, lead one to hope for similar results in puerperal septicæmia unaccompanied by suppuration. I cannot forbear remarking that our present therapeutical resources encourage the belief that we are better able to cope with "puerperal fever" in its various forms than heretofore, more especially when their employment is not unduly delayed.

It only remains for me to say that the further admission of patients into the hospital was immediately suspended on the appearance of unfavourable symptoms in the two patients whose cases I have just related; and that, on inspection, quite enough was found to account for the unhealthy state of the building. Thorough measures were resorted to with marked success, and the recommendation that the hospital should be closed periodically for thorough cleansing and disinfection was adopted by the authorities. This plan has been attended by marked success; and I learn from the matron (Mrs. Freeman) that, at the present time, the condition of the patients is most satisfactory, although other metropolitan lying-in hospitals are not so free from mischief as could be wished. The acting matron (Mrs. Thompson) deserves a warm acknowledgment of the intelligent skill with which she attended to the two patients whose cases are related above.

TWO CASES OF HYPERPYREXIA TREATED BY THE COLD BATH.

By A. T. H. WATERS, M.D., F.R.C.P.,
Physician to the Liverpool Royal Infirmary.

THE following cases may perhaps be considered worth publishing. Their publication has been delayed by the unsuccessful endeavour to recover the lost notes of a third case—one of typhoid fever—treated on similar principles.

CASE I.—I was summoned on May 15th, 1876, to see a patient who was under the care of Dr. Johnstone of Upholland, and it is with his consent that I publish the case. The patient was a married lady twenty-six years of age, of strumous aspect, suffering from an attack (the first) of acute rheumatism, with pericarditis. Her attack had commenced on May 8th, and she was first seen by Dr. Johnstone on the 10th, when the temperature was 104 deg. During the four following days, the temperature, when taken, ranged between 104 deg. and 105 deg. I saw the patient at 5 P.M. on May 15th, about the eighth day. The case was one of severe rheumatic fever, and the physical signs of pericarditis were well marked. The patient was restless, but free from delirium. The pulse was 120, and the temperature 104.2 deg. The urine was very acid. The treatment which had been adopted by Dr. Johnstone was the administration of bicarbonate of potash, with bark and opium, and four ounces of brandy daily. I recommended that the treatment should be continued; the dose of potash, however, to be increased, and that of opium diminished. I further advised that, should the temperature rise to 106 deg., the patient should be put into a bath at 95 deg., to be cooled down to 75 deg. or 70 deg. On the following day, at 1 P.M., Dr. Johnstone found the temperature 106.2 deg., accompanied with "furious delirium". Dr. Johnstone says: "I had her put into a bath (tepid), which was quickly cooled down to perfectly cold. (I cannot give you the temperature, but the water was cold from the pump.)" The patient was in the bath half an hour. The delirium sensibly decreased during this time. She slept a little the night after the bath, and, on the following day, she slept profoundly for two or three hours, and after this there was no delirium. At 10.30 P.M. of the 16th—viz., between eight and nine hours after the bath—the temperature was 102.6 deg. On the 17th, at 9 A.M., it was 103 deg.; at 3.30 P.M., 102.8 deg.; and at 10 P.M. 102.8 deg. Dr. Johnstone says: "Beyond this, I have no further record. I can only say that her progress towards recovery was

uninterrupted. She left home about the end of June for the seaside, feeling perfectly well, but with a slight systolic murmur."

CASE II.—E. W., a domestic servant, nineteen years of age, was admitted into the Liverpool Royal Infirmary, under my care, on November 21st, 1876, suffering from typhoid fever. She had been confined to her bed for about a week, but had not been under medical treatment. There had been slight looseness of the bowels, but no decided diarrhoea. She was ordered milk and beef-tea, and effervescent mixture, three times a day. On the morning of the 22nd, the day after admission, the temperature (then and afterwards taken in the axilla) was 101 deg., and in the evening 104.6 deg. On the 23rd, it was 101.8 deg. in the morning, and 104.6 deg. in the evening. Three ounces of brandy were ordered on this day. On the morning of the 24th, at 9.30, the temperature was 105.6 deg.; at 12.15, 106.4 deg.; and at 12.45, when I paid my visit to the hospital, it had risen to 106.8 deg. There was no delirium; but the patient was restless. Being unable to remain at the Infirmary, I gave directions that the temperature should be taken every quarter of an hour, and that, if it rose to 107 deg., the bath should be used. At 1.15, the temperature was found to be 107.2 deg., and the patient was put into a bath at 100 deg., which was gradually reduced to 75 deg. The patient was in the bath an hour and five minutes, and on removal her temperature was 99.6 deg. At 3 P.M., ten grains of quinine were given, and were vomited; at 3.35, five grains were given, and retained. The temperature began to rise soon after the bath, and at 5.15 it was 105.6 deg., and the bath was again used; the temperature of the water being 99 deg. at the beginning and 76 deg. at the end. The patient was in the bath an hour, her temperature on removal being 100.8 deg. At 6.30, five grains of quinine were given. The temperature again rose after the second bath, and at 8.15 it was 103.8 deg.; and the house-physician thought it best to use the bath again. The patient remained in it half an hour, the temperature of the water being 97 deg. at the beginning and 76 deg. at the end. On removal, the patient's temperature was 99.8 deg. She was put to bed, and I saw her immediately afterwards, and ordered five grains of quinine to be given every four hours. She slept during the night, and, at 9.30 A.M. on the 25th, the temperature was 99 deg. and the pulse 100. She had perspired freely, and had taken six doses of quinine, with a good deal of milk and beef-tea, and nine ounces of brandy, since the first bath. The quinine was now ordered to be taken every six hours. The highest recorded temperature of this day was at midnight; viz., 104.2 deg.; but it soon fell, and, at 9 A.M. of the 26th, it was 100.4 deg., and in the evening 102.4 deg. On the 27th, great pain was complained of in the left side; but no signs of pleurisy or any inflammation could be detected. The pain continued for some days, and was relieved by subcutaneous injections of morphia. The quinine was diminished, and the patient took nothing but milk and beef-tea, with a moderate quantity of brandy. There was no diarrhoea throughout, and only a few characteristic spots appeared. For a few days, the temperature remained very moderate, and there was no complication; but, on the evening of December 2nd, the temperature was found to be 104.8 deg., having risen from 99 deg. since the morning. The patient was carefully watched, and five-grain doses of quinine were given every six hours. The temperature soon began to fall, and, on the evening of the next day, it was 100 deg. With the exception of a rise of the temperature to 102.5 deg. on December 10th, and of 103.5 deg. on the 13th, the recovery was uninterrupted. She was discharged from the hospital on January 5th, 1877, the temperature having been normal for a fortnight.

NOTES ON A CASE OF MULTIPLE EXOSTOSES.*

By THOMAS JONES, M.B., F.R.C.S.,
Surgeon to the Children's Hospital, Manchester.

THE condition of several exostoses developed in the same individual is a sufficiently rare occurrence to induce me to place on record the following remarkable case.

Wm. S., aged 9, a native of Warrington, was admitted into the Children's Hospital on July 3rd, 1877. The immediate cause of the parents seeking advice was a large tumour springing from the posterior surface of the right leg about two inches below the knee. This mass, of irregular shape and firm consistence, was found to spring from both bones. The skin over the tumour was of normal colour and freely movable. A further examination of the boy resulted in the detection of a number of bony outgrowths, of various sizes and

* Read before the Section of Surgery at the Annual Meeting of the British Medical Association in Manchester, August 1877.

shapes, in different parts of the body. They were connected with the following bones: the right clavicle, one at each end; the upper extremities of both humeri; the carpal ends of the right and left radii; the lower ends of both ulnæ; the second phalanges of the ring and middle fingers of the right hand; the outer side of the second phalanx of the middle finger on the left hand; the dorsal surface of the middle phalanx of the left ring-finger; the lower border of the same phalanx; the lower ends of both femora; the posterior surface of the right femur; the upper ends of both tibiae; the outer surface of the left fibula; and the dorsal surface of the middle phalanx of the left second toe.

Besides these outgrowths, the upper end of the left fibula and the lower end of the right radius are very materially increased in thickness. I would also mention a deformity of the left ulna which the boy presents. The lower third of this bone appears to be quite in a rudimentary state, and to join the radius, thereby destroying the power of pronation and supination in the left forearm.

The progressive increase in the size of the osseous tumour situated on the right lower extremity rendered its removal advisable. The operation by a single straight incision in the long axis of the limb was performed on July 18th. The fibular attachment of the tumour was much broader and firmer than the tibial. On section, it was discovered that the greater part of the mass was made up of cancellated bone-tissue, and that it was enveloped by a thin layer of glistening cartilage.

The case I have briefly related, while agreeing in many respects with those already published, differs in some particulars. It coincides with the cases referred to in Paget's *Surgical Pathology*, and with Dr. Poore's (*Lancet*, Nov. 29th, 1873), in the tolerably symmetrical arrangement of the growths, and in those on the right side being larger than those on the left; but, unlike these, careful inquiry has failed to establish the presence of any osseous deformities in other members of the family.

I am unable to offer any theory as to the causation of these exostoses. I think, however, I may say with confidence that they were not the result of conditions which are generally looked upon as causes—such as rickets, syphilis, and struma. There is an entire absence of the usual indications of either struma or syphilis, and the conformation of the osseous system in general renders the probability of rickets ever having existed very unlikely.

The local hypertrophy of the right radius and left fibula appears to lend some countenance to the observation made by Sir James Paget, that these exostoses are to be regarded as closely related to osseous malformations by excessive development.

In conclusion, I would submit that the formation of a number of bony tumours in connection with the osseous system should be looked upon as evidence of a constitutional ossific dyscrasia.

SURGICAL MEMORANDA.

ON TREATMENT OF FRACTURE OF BOTH BONES OF THE LEG.

I BEG to offer a suggestion in the treatment of fracture of both bones of the leg. We have all noticed the difficulty of keeping the inner edge of the patella in a line with the great toe; that is to say, after the bones have been carefully set in the straight position with the inner edge of the patella in a straight line with the great toe, after the lapse of a few days the patella is more to the outer side than it should be, in consequence of the external rotation of the leg from the hip. My plan of treatment is to set the limb in the straight position, to swing it in one of Salter's cradles, and then to rotate the whole limb outwards. The advantages of this treatment are: 1. The greater comfort of the patient, as it is the natural position of the limb; 2. The prevention of that rotation at the seat of fracture which ends in the turning in of the foot after cure.

J. B. RICHARDSON, M.B. (late House-Surgeon Torbay Hospital), Lynsted, Torquay.

CATGUT LIGATURES AND DRAINS.

It is not my purpose to open up a discussion with Mr. Lane upon the fitness of catgut ligatures; but I must crave permission to make a brief statement upon a question of fact. In calling my description of the state of the vessel ligatured, as revealed *post mortem*, "very singular", Mr. Lane seems to throw some doubt upon its accuracy. May I, therefore, be permitted to state that the artery was exactly as I described—"cut through, with the exception of a short interval about a

line in length"? On referring yesterday to the *post mortem* record of the case made by the pathologist to the infirmary, Dr. James Ross, I find, indeed, that it is spoken of as if completely cut through; but this was not the case, as I found on demonstrating the specimen to my class in practical surgery at Owens College. In the same record, indeed, I find that a loose and soft coagulum is mentioned as being present on the proximal side; but Dr. Ross told me yesterday he regarded this as a *post mortem* clot, and in this opinion I concur. That the ligature was properly tied, we had evidence in the absence of the radial pulse for two days; its reappearance at this date being, I think, due to a yielding of the ligature and a re-establishment of the through current of blood. The reason that no violent hæmorrhage took place before death was doubtless due to the fact that the external wound had nearly healed; and there was much firmly organised lymph around the vessel, forming, for the time at least, an efficient barricade.

S. MESSENGER BRADLEY, Manchester.

THERAPEUTIC MEMORANDA.

ERUPTION AFTER BROMIDE OF POTASSIUM.

REFERRING to Dr. W. Russell's interesting case of bromic eruption controlled by arsenic (*BRITISH MEDICAL JOURNAL*, March 16th), I would point out that Bartholow says: "Bromic acne may be, in part at least, prevented by the conjoined administration of arsenic" (three to five minims of liquor arsenicalis) (*Materia Medica*, p. 371), and I have verified this several times. It deserves still further inquiry, and the influence of arsenic itself over the nervous system is such as to make it, for its own sake, a most useful adjunct to treatment by the bromides in many cases, *e.g.*, of cerebral or spinal congestion.

EDWARD MACKEY, M.D.

OBSTETRIC MEMORANDA.

INTRODUCTION OF THE HAND INTO THE UTERUS AND REMOVAL OF THE PLACENTA, SIX WEEKS AFTER DELIVERY.

IN none of the cases quoted by Dr. Matthews Duncan, in his recent paper on the subject (*BRITISH MEDICAL JOURNAL*, November 1877), was the introduction of the hand into the womb, practised at nearly so long an interval as six weeks after the expulsion of the child.

During my absence from home on December 11th, 1875, Mrs. L., aged 25, and mother of three children, began to abort at the middle of the fifth month, and during the night was delivered, without assistance, of a well-formed male child of that term. My friend Dr. St. Clair, who saw the patient for me, three hours after the child had been born, was unable to remove the placenta, owing to the obstinate refusal of the patient to submit to interference. On my arrival next day, twelve hours after the child had been expelled, I found the cervix unusually long and the os firmly contracted; but, from the size of the womb, I concluded it still enclosed the placenta or a large clot. There was then no doubt in Dr. St. Clair's mind that the placenta was still *in utero*; but there was, he said, a possibility that it had come away, as at least one vessel had been emptied without his inspection. All efforts, then, within the bounds of legitimate force, only proved the futility of further attempts to reach the interior of the womb. Nothing then was to be done, but to wait and watch for symptoms. So things went on from day to day and from week to week until, at last, I began to think that the placenta must have been removed unnoticed, or, disintegrated, had come away in the discharges, which all along had been considerable. The possibility of its being absorbed was also suggested. During this time of considerable doubt and no little anxiety, I sought and availed myself of the kind and valuable counsel of several friends. The patient gained in strength, and there was not an unfavourable symptom; but the abdomen increased in size, and the patient herself imagined that she was still pregnant with a second child. While I was with her, however, on January 22nd, 1876, a gush of blood poured from her without warning, saturating her clothes and the bed on which she was lying. With ergot, and by using my finger as a plug in the os, which was dilated to about the size of a sixpence, I endeavoured to control the flooding, and as quickly as possible got the patient under chloroform, introduced my hand into the vagina, and with great difficulty dilated the os until at length I got my whole hand into the womb. There I found a large placenta, only partially, for about one-third of its surface, detached from the uterine wall; the remainder I peeled off