on glucose causes it to solidify, and renders the needle unfit for use. The syringe which I have mentioned can be obtained from Messrs. Maw, Son, and Sons.

Even in the weakest premature syphilitic baby I have never seen anything approaching a local inflammation following an intramuscular injection of galyol or mercury, neither do the injections appear to cause pain. The babies' motions are usually grass green for a day or two after the injection of galyol, but there is no other evidence of digestive disturbance.

It was difficult at first to determine what dose of salvarsan the babies should be treated with; to give an intravenous injection to a baby from 2 to 7 days old is usually impossible, but I was fortunate enough to find a preparation of galyol in glucose which is admirably suited for the purpose of intramuscular injection. I made a rough calculation by comparing the weight of the baby with that of the mother. A newly born baby is about one-seventeenth the weight of the mother; the average dose of galyol for an adult is 30 cg., one-seventeenth of that quantity would be about 2 cg. This should be gradually increased up to 5 cg. or more as the child grows, and it is borne very well. The mercury is given in doses from $\frac{1}{4}$ to $\frac{1}{2}$ grain or more, corresponding to 1½ to 3 cg.

The safest and most convenient way to give intramuscular injections to new-born babies is in the gluteal region, and if a line be taken from the anterior superior spine of the ilium to the commencement of the gluteal fold and this line divided into three sections, anywhere in the middle third is the region to select. The intramuscular galyol and mercury injections can be given the same day on opposite sides, and are well borne. It is advisable that there should be an interval of a week to ten days before repeating the injections.

[The chart* and case histories were explained and described here.]

In looking over the number of mothers who have been treated by me, out of thirty cases six babies have been born free from syphilis, or, to put it more correctly, free from any evidence of that disease, having a negative Wassermann reaction at birth which continued on future examination of the blood, although the mothers have still given positive reaction for a considerable time after delivery.

It has been found that those babies who have at first a positive reaction generally yield a negative reaction after treatment sooner than their mothers. Up to the present I have not found any case in which a baby who had become negative has later developed a positive Wassermann reaction. The average number of doses of galyol required to bring about a negative reaction has been 6.5, and the amount per case 26 cg. With one exception (Case 15) it has been found that the child gained regularly in weight and showed no further signs of syphilis.

On January 10th Dr. Amand J. Routh read a most instructive paper before the Harveian Society in which he gave extracts from the report of the Royal Commission on Venereal Diseases, and showed the deadly effect of syphilis on the unborn and newly-born child, and the apparent hopelessness of treating such cases. I quote the following paragraph from his paper:

There is no doubt that congenital syphilis is a more serious infection than primary syphilis, and that the treatment of congenital syphilitics is less satisfactory than in those infected primarily, and Charles Gibbs writes to me that he has never known a positive reaction in a congenital syphilitic child become negative under treatment.

The wastage of child life is terrible. Dr. Routh estimated that 27,000 deaths, in England and Wales alone, occur annually in the antenatal period and the week following birth as a result of syphilis, and Dr. Russell Andrews, in his evidence before the Royal Commission on Venereal Diseases, stated that nearly 50 per cent. of all syphilitic fetuses are stillborn, and that 75 per cent. of those born alive die within the first year, most of the deaths occurring during the first week of life.

The accommodation at the Thavies Inn Venereal Centre is so limited that the cases cannot be admitted before the

sixth month of pregnancy, and the treatment is therefore often not begun as soon as it should be. With a larger hospital and earlier treatment, I am of opinion that very few of these syphilitic children would be born dead, that a larger proportion of them would go to the full term, and that, if not free from syphilis at birth, they could by treatment soon become so.

The treatment which I have described has been brought to the test of experience sufficiently long to show what can be done for these cases, and the results are most encouraging. But the future treatment of ante-natal and post-natal syphilis cannot be allowed to remain where it has been in the past; and the treatment which is being adopted to-day will be improved on to-morrow. I am certain that the lives of thousands of syphilitic children have been lost unnecessarily in the past, while it would have been a blessing to themselves and humanity if many of those who have survived had never lived in misery to be a burden to the State. In the future such children may be made healthy and useful members of the community. I am indebted to the Local Government Board and the City of London authorities for providing a hospital which has given me the opportunity of bringing my evidence for this statement before the Obstetrical Section of the Royal Society of Medicine this evening.

If I were to criticize my year's work I should say that, had the drugs been in bigger doses, the results would have been still better; but one had to tread with caution the unknown paths of research in the case of these newly born children, and, on the whole, I am of opinion that the means adopted are only the beginning of still greater progress in the future treatment of ante-natal and post-natal syphilis.

What has impressed me most in the treatment of these cases has been the large doses which these newly-born infants are able to take and the excellent results which have ensued.

Conclusions.

1. Syphilitic pregnant women can be treated with salvarsan, even up to the day of their confinement, with safety and every advantage.
2. A mother whose blood gives a positive Wassermann reaction may, after treatment, be delivered of a child whose blood gives a negative reaction. The child may continue to thrive and give a negative blood test.
3. Syphilitic children can safely be treated by salvarsan immediately after birth.
4. Salvarsan, combined with treatment by mercury, has a more certain and quicker action in producing a negative Wassermann reaction in the child than in the mother.
5. In nearly all syphilitic children born alive, treatment can convert a positive Wassermann reaction into a negative, and such children appear to become healthy and show a regular weekly gain in weight.

NOTE.—Between a syphilitic mother and a child who gives a negative Wassermann reaction at birth the placenta appears to act as an interceptor of syphilitic virus, probably brought about by the chorionic ferments. See the paper referred to above by Dr. Amand J. Routh, on antenatal syphilis, *BRITISH MEDICAL JOURNAL*, January 12th, 1918, p. 47.

A METHOD OF OVERCOMING THE ADHERENCE OF TENDONS AFTER SUTURING.

BY

P. C. COLLINGWOOD FENWICK, L.M.S.S.A.LOND.,
FIRST HOUSE-SURGEON, NORFOLK AND NORWICH HOSPITAL.

SEPTIC gunshot wounds of the hands and feet often involve important tendons, and if these cannot be satisfactorily dealt with they become adherent to the surrounding structures and the function of the limb is more or less impaired. In this hospital we have recently had a case of this class which I think may be of interest to orthopaedic surgeons, as I have seen so many gunshot wounds which have healed leaving the hand partially useless owing to fixed and adherent tendons.

Pte. J. B. was admitted with a shrapnel wound on the posterior surface of the left hand. The wound was very septic and the whole hand swollen and oedematous. He was unable to extend his three inner fingers as about two inches of the tendon of the *extensor communis digitorum*

* The chart referred to gave the result of 24 babies born at the hospital: 5 were born negative; 7 became negative after treatment; 3 mothers had no treatment before death of baby *in utero*; 1 died from syphilis; 1 died suddenly without any apparent cause; 1 was born dead; 6 remain positive under treatment, and are doing well; 6 babies were born from syphilitic mothers since the chart was drawn up. 3 are already negative.

had been blown away. He was given saline hand baths and boracic fomentations. After about six weeks the wound had healed; he was sent to a convalescent hospital for three months and during that time he was given massage and faradism to the muscles of his forearm. On his return to this hospital I operated upon his hand,

making an incision from two inches above the posterior annular ligament to the knuckles. The remaining portion of the extensor tendons were involved in scar tissue, and it was somewhat difficult to dissect them out.

A flap of the tendon of the extensor communis digitorum was brought down from above the ligament, which was not interfered with, and at its distal end was split into three parts and stitched with silk to the cut tendons of the three inner fingers. To prevent the newly constructed tendons becoming adherent to the scar and surrounding tissues thick catgut was wound round each tendon as far

up as the annular ligament, as seen in the accompanying drawing. The wound was then stitched up with salmon gut and the hand placed on a flat splint. Three days after the operation the splint was removed and the patient allowed to move his fingers slightly. A fortnight later faradism was applied to the muscles of the forearm, and it was found that the extensors of the fingers were working well.

The incision healed by first intention, but ten days after the operation a small quantity of pus discharged from one of the stitch holes; this soon stopped, and seems to have had no detrimental effect on the result of the operation, which has been excellent. The patient can now fully extend and flex all his fingers.

For permission to report on this case I am indebted to Mr. S. H. Burton, F.R.C.S., senior surgeon of this hospital, under whose care Pte. J. B. was admitted.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

FLEXED KNEE-JOINTS IN BELOW-THE-KNEE STUMPS.

THE most effective method of extending knee-joints that have become flexed and fixed after amputation is shown in the accompanying illustration. It has been used at the Pavilion General Hospital for Limbless Men at Brighton during the past year.

It consists of a plaster-of-Paris saddle with a light pommel, along the back of which a wooden spreader is fixed by enclosure in the plaster bandages. Part of the girth behind the thigh is cut away to admit of the limb being withdrawn upon occasion, though this may not be necessary, as it should be worn continuously.

A Martin's rubber bandage is, when the cast is dry, wound round the stump and the end of the spreader as firmly as the patient will permit. The distal edge of the bandage should encroach on the ends of the stump and the spreader, in order to prevent the bandage slipping upwards.

It should be worn day and night until the joint yields, which it usually does more rapidly and effectively than by

any other method we have tried. The action of the rubber bandage is continuous, and muscle resistance is tired out and defeated, especially at night.

W. A. CHAPPLE, M.D., Ch.B., M.R.C.S., D.P.H.,
Brighton. Major R.A.M.C.

SUPRAORBITAL ZONA.

IN reviewing this subject one is often struck with the more or less casual way it is discussed, orally or in the books. It merits more attention. It is so different a complaint in the child, the young adult, the middle-aged, and the old. In the child and young adult it is seldom at all serious; in the middle-aged it is oftentimes very serious.

The intense pain of the onset, the possible blindness, the constitutional depression and weakness during the attack, the severity of the pain left, which may last for years, the scarring—all make this disease in the middle-aged and old an anxiety.

The following is a case in point:

A. C., a delicate woman aged 44, in April, 1909, had her abundant hair cut rather severely. From that day until a month later she felt the chill of wind through the hair; then severe headaches set in of a neuralgic type all over the head, with a sense of weight on the top; this state continued until the end of October, nearly seven months after the haircutting; the pain then became limited to the left half of the head, and was very intense. In the middle of November a rash appeared on the forehead at the margin of the hair and on the forehead itself; it consisted of small vesicles, which rapidly passed into large bullae, becoming puriform, and breaking down at once, the base showing a necrotic condition. The general health was not good, owing to depression and the weakness from loss of rest due to the intense pain. There was much pain in the eye and down the side of the nose. The necrosed spots were treated with a hot solution of glycothymoline applied on lint, changed every half-hour. In about six hours all the bad spots seemed to have taken on repair and the application was ordered to be continued every two hours for another twelve hours; the subsequent treatment was a simple unguent. During the hot applications the pain much decreased, but as the spots got better the patient complained of haziness of the sight and there was increased tension of the globe. Eserine was at once used, and in two days the tension fell, but there was now some iritis, which under the usual treatment subsided. The subsequent history was uneventful. The scarring is bad, and on the slightest drop in health there is pain in the forehead. I suggested electric vibratory massage over the left side of the head, which gave much relief, and it was applied later to the eyebrow with excellent effect.

Drugs are of no avail in removing the after neuralgia, which I have known patients to suffer from for years, but I venture to think that in electric vibratory massage we have a means of giving great relief if not producing cure.

Bodicote.

F. B. JUDGE BALDWIN.

AN EARLY SIGN OF HEART INCOMPETENCE.

CLINICALLY, one is often thankful for small hints, and the earlier the sign of impending trouble the greater should be its value. For this reason I think pitting of the heels is worth looking for when we might expect but fail to find oedema over the tibia or dorsum of the foot. Slight pitting of heels appears from my observations to be very common in elderly adults, but when it is marked, and the pulse pressure is found to be, perhaps, 100 or 110 only, then the heart is not doing its work as it should. The other factors in blood pressure, apart from inefficient action of the heart, should of course be taken into consideration, and lowered arterial tonus, if uncompensated by more vigorous heart action, might account for a tendency to oedema not primarily cardiac. It is only suggested that this sign may be of use where more obvious indications of a faulty circulation have not yet appeared.

Fouriesburg, O.F.S.

FRANK ELVY.

THE American Red Cross Society has established a general dispensary and hospital, with a children's clinic, in Jerusalem, and has taken over two orphan asylums with four hundred children.