tient's arrangements better to order the aperients to be taken in the morning.

For the third class of case (where there is a large prolapse of mucous membrane bearing piles) it becomes necessary to perform Whitehead's operation, of dissecting the relaxed mucous membrane away. In my opinion this proceeding is not often called for, but when it is the result is very good. If this operation is carried out as described by its author, I cannot understand the adverse criticism it has received in some quarters. The common error is to remove the external sphincter, wholly or in part, and then blame the operation for incontinence of fæces, instead of the operator who attempted it.

Bad results of any operation depend sometimes on the lack of judiciousness and technique of the operator, and not on the demerits of the operation.

In looking up the literature of piles I find that Folker of Hanley several years ago devised a special clamp, figured in *Arnold's Catalogue*, for suturing piles with a special needle and catgut.

There is a casual reference to suture of external piles in Bell's *Manual of Surgical Operations*, sixth edition, 1888. In describing the treatment of external piles he says, p. 317: "If the surgeon after excising a pile or piles will take the trouble to stitch up the wound with catgut, he will find the cure much more rapid and less painful than when this is omitted." In the treatment of internal piles, however, he advocates ligation.

Mr. Robert Jones of this city, in the *Provincial Medical Journal*, August 1st, 1893, advocates a method of clamp and suture on the same lines as I have described. These are the only references I have been able to find.

I have [April, 1898] performed the operation 33 times,² and the average length of time during which the patient was confined to house or hospital has been 10.3, reckoning two cases that were in bed for other reasons, for twenty-two days.

NOTES.

¹ Since writing the above I have found Doyen's broad ligament clamp (small size) infinitely superior to any pile forceps. ² Forty-five times, September, 1898, with average in hospital or bed of 8.3 days.

ANTISTREPTOCOCCUS SERUM IN THE TREATMENT OF PRIMARY VENEREAL SORES AND THEIR COMPLICATIONS.

By JAMES MOORE, F.R.C.S. EDIN.,
Belfast.

WHETHER the chancroid is an entity caused by the streptobacillus described by Ducrey, or an ordinary septic abrasion—the anatomical and physiological peculiarities of the genital organs accounting for the subsequent ulceration and complications—it certainly bears a very close relation to infection of a small wound by the streptococcus in any other region of the body. This analogy suggested to me that antistreptococcus serum might possibly have a curative effect on the chancroid, and prevent suppuration (or liquefaction) of the acute inflammatory bubo so often accompanying it.

CASE I.—S. Y. consulted me on March 7th about pains in both sides over Poupert's ligament. He had had connection on February 28th, and on March 3rd noticed a sore in the coronal sulcus to the left of the frenum. On examination, I found four typical chancroids, three having been produced by auto-inoculation, two glands in the left groin and one in the right considerably swollen and very painful: the outline of each gland could be easily felt, there being very little periaidenitis. The patient informed me that the pain in the glands commenced about twenty-four hours before consulting me. I washed the glans penis in hot boric solution, dried with pledgets of cotton wool, and sprayed the sores for ten minutes with peroxide of hydrogen. I then injected 1 drop of pure liquid carbolic acid into the base of each ulcer by means of a fine hypodermic needle and ordinary hypodermic syringe, passing the needle about one-eighth of an inch into the tissues. The ulcers were then dressed with a powder, containing lozoin and zinc oxide, equal parts. The skin over the lower part of the abdomen was disinfected in the usual manner, and 5 c.cm. of antistreptococcus serum injected about an inch above and an inch to the outer side of each bubo, after allowing the patient to rest for about twenty minutes. A pad of sterile wool was applied over each point of injection, and kept firmly in place by a double spica bandage. I ordered the patient to bathe the penis for half an hour in as hot water as could be borne, and subsequently dress the ulcers with the above powder twice daily.

On March 9th the ulcers had a healthy appearance, the pain and swell-

ing in the bubos had diminished. The patient said that for twelve hours after injection the region around the point of injection was painful. A scarlatiniform eruption was present on the lower part of the abdomen and inner part of the thighs. I injected 5 c.cm. into each side as before, and continued the local treatment of the ulcers.

On March 12th three of the ulcers had healed, and only the parent ulcer remained, and healthy granulations covered the entire base. There was no pain in the bubos, and swelling was scarcely evident.

On March 16th the ulcer had healed, and there was no trace of bubo. I have seen the patient twice since, and he continues in health.

During the past eight months I have used this method of treatment in 48 cases of acute inflammatory bubo, and in only 7 cases did suppuration occur. In 3 of these the inflammation had been in existence at least four days. I have also used this serum in the following case of phagedænic chancre.

CASE II.—On July 6th I was called to see R., who had been leading a very irregular life, in which alcohol played a very prominent part, for the past five years. He had a suspicious connection on June 4th, and on June 14th an ulcer appeared on the under surface of the glans penis implicating the frenum. From that time until my seeing him the ulcer had been practically neglected. I found the patient in a semi-comatose state, the skin dry and hot, the pulse 130, the temperature 104.3° F. On examination of the under surface of the glans penis was entirely destroyed, and the urethra exposed. The discharge from the sore was offensive and sanious. The base was studded over with little patches of false membrane of a yellowish-green colour. On removing one of these a raw bleeding surface was exposed. The entire penis was swollen, of a dark-bluish colour, and presented numerous bullæ. The glands in the region of Poupert's ligament were not swollen. There was no rash on body or limbs. The fauces were congested. I ordered the penis to be immersed in a hot solution of mercury perchloride (1 in 5,000) for two hours, and twice daily; in the intervals iodoform was to be dusted on the ulcer, and the penis wrapped in gauze wet with the hot solution, and changed every twenty minutes. Into the right leg I injected with the usual precautions 10 c.cm. of antistreptococcus serum, and ordered him small doses of strychnine with tr. strophanthus, *mv*, every four hours.

On July 7th the temperature was 102°, and the pulse 120. The patient was brighter and answered questions more readily. There was no change in the ulcer. Some of the bullæ had disappeared from the penis. The right leg was red and swollen for about six inches above the point of injection. The inner side of the thigh showed a scarlatiniform eruption. The glands in Scarpa's triangle of the same side were enlarged. I ordered lead and opium lotion to be applied to the swollen part around the point of injection, and continued the baths, etc., and general treatment.

On July 8th the patient was much brighter, the pulse was 105, and the temperature 101.5° F. The swelling in the right leg and glands had diminished. The ulcer showed much less false membrane, and the discharge was less sanious. I continued the general treatment, and injected 10 c.cm. of serum into the left arm.

On July 10th the pulse was 98, the temperature 100° F., and the general condition was much improved. The discharge was purulent, with streaks of blood. The false membrane had almost entirely disappeared, and the bullæ entirely. The penis was less swollen, and had a healthy appearance.

I was now at a loss to know whether the hot antiseptic baths to the penis, with iodoform to the ulcer in the intervals, combined with the general tonic treatment, or the use of the antistreptococcus serum was responsible for this happy result. I saw the patient daily for six days; did not inject any serum, but continued local and general treatment as formerly.

On July 16th the pulse was 115, the temperature 103° F. The penis was swollen and painful. The discharge from the ulcer was sanious. The base of the ulcer on clearing away the discharge showed numerous cup-shaped depressions. There was no extension of false membrane. I injected 10 c.cm. of serum into the right arm.

On July 18th the pulse was 98, the temperature 100°. The swelling and pain in the penis had abated, and the ulcer looked healthier.

On July 19th 10 c.cm. of serum were injected, and I gave 10 c.cm. of serum every third day up to July 28th. On that date I noticed two undoubted mucous patches on the left tonsil, and a few small papular syphilides on the abdomen, chest, and face. The temperature was 99° F., the pulse 82. The ulcer was one-third of its original size, and healthy granulations covered the entire base.

On August 1st the patient was convalescent, and taking small doses of mercury and iron.

I have to thank Dr. Calwell for kindly advising me in reference to the condition of the patient's heart and lungs.

From my experience with antistreptococcus serum in venereal sores and their complications, I have arrived at the following conclusions:

1. While recognising the great importance of early local antiseptic treatment of the chancroid, I believe that if 5 c.cm. of the serum is injected subcutaneously into each inguinal region in cases in which inflammatory bubo is likely to develop, it will prove a good prophylactic measure, and assist in healing the chancroid.

2. If inflammatory bubo has already developed, and the acute inflammatory symptoms have not been present more than forty-eight hours, 10 c.cm. injected into the inguinal region corresponding to the inflamed gland will cause resolution in the majority of cases.

3. If there is evidence of pus formation the serum may possibly limit the extension of the suppuration, but in this class of case my results have been anything but satisfactory.

4. The serum should always be injected into the area

drained by the infected gland, preferably the right and left inguinal region. I have not seen good results by injecting it into remote areas.

5. In phagedenic ulceration complicating venereal sores this serum would appear not only to neutralise the toxins in the blood, but also to bring about a healthy condition of the ulcer.

A CASE OF SEPTICÆMIA TREATED WITH ANTISTREPTOCOCCUS SERUM: DEATH.

By E. A. LERMITTE, M.B., B.S., M.R.C.S., L.R.C.P.,
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THE following case, when first seen, merely presented the features of acute lymphangitis, such a case as often gets rapidly well under the treatment adopted, and gave no warning of the terrible course it was doomed to run.

The drainage of the patient's house was in a decidedly defective condition, and had been condemned by the district sanitary inspector; this fact may have some bearing on the subsequent development of the case.

On July 18th W. H. consulted me, giving the following history: He was inspecting some tea chests which had been damaged by fire and water at the docks on July 13th, when in passing down a dark passage he struck his leg against a projecting chest and fell heavily forward. From that time to July 18th, when I saw him, he had had pain in the leg and sundry constitutional symptoms—headaches, etc.—which he ascribed to his liver; beyond this he did not complain of anything. He had gone about his business as usual, although not feeling quite well.

I found in the lower third of the right leg, over the prominent ridge of the tibia, an extensive ecchymosis with inflamed lymphatics extending thence to the groin; there were no enlarged glands in the groin. In the middle third of the shin, immediately above the bruise, there was an old wound, the result of an injury inflicted some twenty years earlier, which had never healed. The whole of the anterior aspect of the limb was swollen, hot, red, and tender; at one spot near the old wound doubtful fluctuation existed, and at that site I made a deep incision, but evacuated no pus. The wound was dressed antiseptically, the inflamed lymphatics painted with glycerinum belladonnæ (1 in 2), and the entire limb bandaged.

On the morning of July 19th there was less swelling and redness of the leg. The temperature was 102° F.; pulse 80, regular, and of good volume. At 8 P.M. the temperature had risen to 105.4°, and the patient became delirious. He was ordered phenacetin gr. iv, caffeine citrate gr. j, in a powder every four hours; at midnight the temperature was 104°, and the patient was much quieter.

On July 20th he was delirious all day, talking incessantly, but had occasional lucid intervals. The temperature rose again in the morning to 105°; he was then ordered cachets containing quinine sulph. gr. iv every four hours; by 10 P.M. the temperature had fallen to 103.6°.

On July 21st the general condition of the patient remained unchanged; free incisions were made in several places in the leg; a quantity of serous fluid was discharged through these incisions, but no pus found. His mental condition improved slightly, and the temperature fell to 99.8° at 10 P.M. During the two succeeding days the leg was dressed with boracic fomentation every four hours. Several more incisions were made in the leg, wherever fresh patches of redness appeared. The quinine treatment was continued throughout, and fluid nourishment (about 80 ounces) and brandy 6 ounces administered in the twenty-four hours. The delirium continued unabated during these days. The temperature fluctuated between 102° and 97.4°.

On July 24th I obtained the consent, previously refused, of the patient's wife to treatment by injections of antistreptococcus serum. At 11.15 A.M. I injected 10 c.cm. of the serum with the strictest antiseptic precautions. The temperature at that time was 99.2°, and fell to 99° subsequently; pulse 100, respirations 20. No perceptible result followed this injection, and the same quantity of serum was again injected at 3.30 P.M., and again at 7.30. At 10 P.M. the temperature had risen to 101° F.; 10 c.cm. of serum were injected at 11.30 P.M., and during the night the temperature fell to 98.4° F.

On July 25th, at 11.30 A.M., I injected 10 c.cm. of serum, making the fifth dose, and exhausting all the serum I had been able to procure on the previous day (Sunday). The temperature rose again to 99.4° at 2 P.M., and the patient was steadily becoming weaker. The messenger sent for a further supply of serum returned with serum supplied in hermetically sealed tubes from the Institut Pasteur, which I found it impossible to open without destroying the serum. I then sent to Messrs. Allen and Hanbury, who at some inconvenience to themselves supplied me with 6 phials, but these arrived too late. During the afternoon the patient was seen by Mr. Charles Ryall, and it was then found that gangrene had set in in the right foot. At 9 P.M. the patient became collapsed, and although strychnine was injected and everything done to restore him, he sank and died at 9.40 P.M.

I do not think it possible to emphasise too strongly the proposition already often enunciated, that if the serum treatment of these and similar cases is to be of any avail, that treatment must be commenced as soon as a reasonable diagnosis can be made. Delay reads disaster. Furthermore, the initial dose should be a large one, probably 20 c.cm.

May I be allowed to add that it is a pity that the Institut Pasteur does not issue simple directions in English as to the mode of opening its hermetically sealed glass tubes containing the dried serum, and the dissolving of the same, in

place of the French literature in which the bottles are now wrapped? It is very annoying to find that you have to wade through a quantity of French literature of a technical character before discovering that the phial is to be "held in a flame" in order to open it, and when so "held in a flame" it is still more annoying to discover that you have ruined the serum by the application of heat sufficient to break the bottle.

NOTE ON THE TREATMENT OF ARTHRITIS BY MEANS OF HOT AIR BATHS.*

By T. SYDNEY SHORT, M.D.,

Visiting Physician to the Infirmary and Assistant Physician to the General Hospital, Birmingham.

ATTENTION has lately been drawn to the treatment of chronic joint affections by means of hot air locally applied. That there is nothing new in the application of dry heat to such cases the old-fashioned method of easing pain by means of bran or salt bags heated in the oven and placed next to the affected part abundantly testifies. It has been maintained, however, that special benefit accrues from the application of superheated dry air by means of an apparatus especially contrived and patented. Some twelve months ago a case came under my care which seemed particularly suitable for such treatment. I determined to try the effect of hot air given without special apparatus beyond what may be possessed by any hospital, or could be procured for use in any house. This case was shown to the Pathological and Clinical Section of this Branch at the end of last session. The result was so satisfactory that during the last six months I have been making some observations on this method of treatment, and this short note is the result of my experiences up to the present time.

If the drug treatment of chronic joint cases were satisfactory there would not be a call for further methods, but I think all will admit that it leaves much to be desired. Acute rheumatism usually, if not always, succumbs to sodium salicylate. It is not so with subacute attacks. In fact I have come to the conclusion that in some forms of subacute rheumatism salicylate, if it does not make the patient worse does very little good.

We generally look upon acute rheumatic fever as a serious condition, and regard subacute "rheumatics" as an altogether lighter ailment. I am not sure, however, that we are justified in taking this view, when it is considered that an acute ailment once weathered without sequelæ is not so serious a matter as a chronic one continually recurring. It is true that a subacute case of rheumatism may never be actually so ill as an acute one at its height; but, on the other hand, it may never get really cured. If by the time the patient has reached middle life the hands or the feet are in any way crippled it is difficult for him to support a family or even to gain a livelihood. It was with a view to improve the condition of this class of case that the hot air bath was tried.

DESCRIPTION OF THE APPARATUS AND METHOD.

The apparatus employed is that in common use in hospitals for the administration of hot-air baths in cases where profuse diaphoresis is indicated. It is used in the following manner: The patient lies in bed between blankets. The tent which covers him is made of two large cradles, covered first with blankets, then with macintosh sheets, and then again with blankets. The coverings must be arranged at the top of the tent in such a manner that a small opening or chimney can be made to let out the hot air when it has become saturated with moisture. I have not found it necessary to make any counteropening, as the entering air finds plenty of inlet between the blankets and the chimney or flue of the heating apparatus. If the packing be too tight, it is obvious a counteropening of some kind must be made. There should be plenty of spare blankets near the head, in order that it may be wrapped in folds round the patient's neck and thus made as airtight as possible. The cradles that I use at the infirmary are made of wire netting on a metal frame; they are cheap and cannot take fire. The flue attached to

* Abstract of a paper read before the Birmingham and Midland Counties Branch of the British Medical Association, October 13th, 1898.