SALVARSAN IN YAWS.

BY

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I AM able to give the results of the treatment of 500 cases of framboesia with salvarsan at the St. Augustine Yaws Hospital, Trinidad, from January to October, 1911. Intramuscular injections only were used, and the usual dose was 9 grains (0.6 gram) for an adult.

The 500 cases were injected as follows: January (20), February (1), March (14), April (87), May (68), June (75), July (101), August (17), September (87), October (30).

The first case was injected on January 4th and the 500th case on October 14th.

The injections were made by Drs. Rost and Cleaver and by myself. Dr. Cleaver kindly acted for me when I had a holiday, and gave most of the injections.

I write this on November 28th, when six weeks and four days have elapsed since the 500th case was injected.

Results.

498 cases are cured (99.6 per cent.).

409 cases were cured with one injection (82.0 per cent.).

75 cases were cured after a second injection.

14 cases were cured after a third injection.

The total number of injections was 603.

Stubborn Cases.

Two of the cases are not yet cured:

S. C., aged 7 years, male. Injected on September 16th. I reinjected him on November 11th.

T. M., aged 14 years, male. Injected on October 2nd. I reinjected him on November 8th.

Both cases show amelioration. Each will be given a third injection next week.

Relapses.

Only 5 cases discharged cured came back, and they were cured with a reinjection. Before salvarsan was used relapses were 12 to 14 per cent.

Complications and Deaths.

When Dr. Cleaver was acting for me, 4 deaths occurred among cases that had been injected by him. Dr. Cleaver is of opinion that none of the deaths were the result of the injections with salvarsan. No local gangrene, no nerve or ear complications, and no dimness of sight occurred in any case. The only complication was the formation of an abscess at the seat of injection in 2 cases.

Deaths at the St. Augustine Yaws Hospital from May to September this Year.

E. S., male, 60 years. Injected May 2nd. Took ill May 18th. Died May 30th. Cause of death certified by Dr. Cleaver to be stomatitis and diarrhoea.

Rammarine, male, 3 years. Injected July 8th. Took ill July 16th. Had fever. Passed 50 ascarides. Died on July 19th. Death certified by Dr. Cleaver to be due to fever associated with worms.

Meenaram, male, 65 years. Injected twice, June 5th and July 15th. Had gonorrhoea. Took to bed August 2nd. Died September 3rd. Cause of death, malarial fever and diarrhoea.

Seecharan, male, 11 years. Injected September 16th. Took ill on September 27th and died same day. Cause of death, fever and convulsions.

There were 103 deaths at the St. Augustine Yaws Hospital during the ten years preceding the use of salvarsan—an average of ten deaths per annum. Seventy-four per cent. of the yaws cases admitted to the St. Augustine Hospital have conspicuous painless enlargement of the femoral lymphatic glands. When discharged cured a minority are noticed to have lost the femoral swellings; a majority retain them, but they are reduced in size and softer.

The absence of complications (except a local abscess at the rate of 1 for every 301 injections) shows that salvarsan is not in itself harmful, and that the deaths and serious complications in the treatment of syphilis attributed to the drug must be due either to the method used or to complications which belong to syphilis alone.

It is usually stated that the active agent for curing in salvarsan is the arsenic. I have proved by experiments that such organic arsenic compounds as sodium cacodylate and arsacetin have no effect in yaws cases, and that the

efficacious preparations soamin and orsudan are far behind salvarsan in curative power.

Mercury utterly failed at the St. Augustine Hospital as a cure for yaws, so if there be the choice of two drugs for syphilis there is no such choice in the case of yaws.

Conclusion.

Salvarsan is a specific for yaws, and there is no danger attending its use for this disease.

AN EXAMINATION OF ABOR ARROW POISON.

BY

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THE material here discussed was scraped off an arrow-head removed from a wounded man. It was moist and earthy looking.

Resinous Body.

An oleaginous resinous body was extracted which was soluble in alcohol (90 per cent.) and dilute acetic acid, also in ether and in chloroform, but insoluble in water. It gave the "croton oil reaction" on the tongue and in the pharynx. A little rubbed on the skin of the forearm raised a crop of minute papules in twenty hours. This patch was slightly reddened and itched; it was not painful, and only slightly tender on pressure; after ten hours more it had faded and slowly resolved. Croton oil itself will vesicate the skin. Inoculation of half the extract from this one arrow-head into a guinea-pig gave rise to no symptoms of poisoning.

Residue.

The insoluble residue was dry and powdery. It consisted of vegetable fibres, cells, and detritus, with some earthy matter, but no animal tissue; it gave no physiological reaction. A minute trace of an alkaloid-like body was obtained which had a slightly bitter taste, but no other characters by which it could be recognized. There was no aconite present in the poison.

Conclusions.

I suggest that aconite is not used by the Abors, and that the idea that it is present on their arrow-heads is due to the somewhat similar physiological tongue test. Using the frog test no confusion between the two could arise. There is no anaesthesia with croton, and to an "educated tongue" the burning, tingling sensation is different.

It would seem that the "arrow poison" is a paste made by pounding the soft parts of *Croton tiglium* plant, and not obtained from the seeds.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

HYDRAMNIOS: TWINS: ADHERENT PLACENTA.

Mrs. McD., aged 35, who had had four children, complained of pain over the right lower ribs, with sickness and vomiting. Pleurisy was detected, and treatment ordered accordingly. The abdomen was noted to be markedly distended, and the patient calculated she was about six months pregnant or thereabout. It was obvious that there was much discrepancy between the size of the abdominal tumour and the period of gestation. No heart sounds could be ascertained, nor any fetal parts palpated. Hydramnios was diagnosed, and the case watched.

The pleurisy and stomach symptoms cleared up, but the patient remained confined to bed on account of abdominal distress and vague pains. The urine contained some sugar, but no albumen. Her previous labours had been normal in every respect. The swelling gradually increased in size until, before delivery, the abdominal distension was enormous, the patient's general condition meanwhile keeping quite good.

Labour set in ten days after the case was first seen. The pains went on slowly, and a bag of membranes could be felt presenting. The patient, whose general condition continued satisfactory, was allowed to progress for a time in the hope that a moderate amount of cervical dilatation might take place. This, however, proved an exceedingly slow process, and after the patient had been in labour for