Clinal and other Notes.

A CASE OF STOVARSOL POISONING.

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Previous History.—The patient, an officer of the Indian Medical Service, aged 30, had ascertained that he was harbouring cysts of Entamoeba histolytica and had been taking stovarsol, four grains twice daily for twelve days; and after an interval of ten days, four grains twice daily for another twelve days. The total amount taken is thus seen to be about 200 grains.

Condition on Admission.—The patient was first seen by me on October 19, 1927, when he had a papular rash on the face, neck and trunk, also to a lesser degree on the extremities. This was accompanied by oedema of the face and neck. Papules were also present on the buccal and palatal mucous membrane which was injected and swollen, causing much pain on swallowing. These symptoms had commenced a day or two previously, which was just about three weeks after he had finished the second course of stovarsol.

The following day he was admitted to hospital. The condition had then become aggravated and he complained of feeling very ill. His temperature was 104°F. and pulse 106. The rash in some ways resembled an urticaria, but he could give no history of taking any food that might have been likely to cause it. He was questioned as to the possibility of it being a serum or drug rash, but his replies were in the negative on these points. His bowels had been freely opened during the previous two days, calomel and salts having been given.

He was put to bed and ordered calcium lactate twenty grains t.d.s., also a pot. chlor. mouth-wash, lotio calamine to be applied to the skin, and given a fluid diet.

Progress of Disease.—October 21: Morning temperature 101°F., pulse 112. Evening temperature 103-8°F., pulse 120. The rash was spreading on the extremities and the throat condition becoming worse. In some places on the neck and in the groins the rash had become vesicular and serous fluid was being discharged.

October 22: General condition much the same.

October 23: The rash on the body had subsided to a mottling, whilst on the legs it had changed to patches of purpura. That evening the history of his having taken stovarsol was extracted for the first time.

October 24: Temperature remained up. Throat and mouth conditions
Clinical and other Notes

were much better, the stomatitis having quite cleared up. However, the face and neck condition was worse, the rash having become vesicular with free oozing from these areas and also from behind the ears and in the axillae and groins.

October 25: A blood culture was made on the 24th, but remained sterile. Urine contained no abnormal constituents. Face, neck and ears had become crustled with the serous discharge and lin. cal. was applied. The rash on the trunk as well as on the lower extremities had become purpuric. It having by now been definitely decided that the symptoms were due to stovarsol poisoning, ten cubic centimetres of sterile sodium thiosulphate solution (containing 0·5 grammes) was injected intravenously at 3 p.m. There was no reaction. The administration of calc. lact. had already been stopped.

October 26: Another 0·5 grammes of sodium thiosulphate was given intravenously and for the first time the temperature dropped to normal in the evening.

There was then no improvement in the condition of the face. The whole of the back and the upper part of the chest were tending to desquamate and leave raw areas exposed.

October 27: 0·5 grammes sodium thiosulphate was given intravenously at 2.30 p.m., and half an hour afterwards patient had a rigor, his temperature rising to 104° F. Skin condition much the same.

October 28: Eyelids and scalp became affected, the area of sensitization having spread. Patient was very drowsy all day and his general condition was the worst it had yet been. 0·4 grammes of sodium thiosulphate was given and no rigor followed.

October 29: Decided improvement in the skin condition since the previous day; 0·4 grammes sodium thiosulphate given and no rigor followed.

October 30: Large areas of skin on legs, thighs and forearms about to desquamate. No sodium thiosulphate given.

October 31: 0·45 grammes sodium thiosulphate given. Temperature rose to 104° F., but patient only had a very slight rigor. The condition of the eyes, face and neck was better. Everywhere else there was very extensive desquamation.

November 1 to November 6: Patient improved daily.

November 7: As the face and scalp tended to relapse slightly it was decided to recommence the sodium thiosulphate injections and 0·35 grammes was given. No reaction followed.

November 8: 0·4 grammes sodium thiosulphate given. This was followed by a severe rigor; patient's temperature rising to 102° F.

November 9: It was decided to discontinue the intravenous injections sodium thiosulphate and give twenty grains orally instead, three times a day, commencing on the 10th; this was done.

November 16: There had been an uninterrupted improvement during the previous week, so the oral administration of sodium thiosulphate was discontinued.
Clinical and other Notes

November 30: An extreme dryness of the skin of the face persisted for nearly a fortnight, but the patient had by this date practically recovered.

December 6: Patient discharged.

I append a temperature chart relating to the patient's first three weeks in hospital.

(1) This case emphasizes the fact that stovarsol should be administered circumspectly, in case the patient has an idiosyncrasy to arsenic. Some individuals may not be affected (as another officer in the same unit as this patient had taken a similar quantity and had no ill effects) but then again others may. The possibility of the cumulative effects developing some time after the drug has been withdrawn (in this case three weeks) should be borne in mind.

(2) Regarding the treatment. I cannot explain the causation of the rigors unless they were due to impurities in the solution of sodium thiosulphate. As this was a locally (Shanghai) made product, I had no guarantee with it. Anyhow they did the patient no harm. As to the oral administration of the drug, the patient never experienced any colic, which is said sometimes to occur.

(3) Finally, I may add that the patient was an Indian, and not a European. I am not aware if idiosynrasy to arsenic preparations is more common in Indians, but I do know that when giving salvarsan derivatives to Indian patients the usual doses must be modified.

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