

Different methods of vaccination.—As in previous years, all vaccination operations were performed with glycerinated lymph manufactured in the Vaccine Depot at Shillong.

The record of work for the year is somewhat disappointing. The number of operations performed has decreased and the expenditure has somewhat increased as compared with last year. The explanation probably lies to some extent in the fact that closer supervision in so far as it has been possible to exercise it, has decreased the extent to which falsification is practised, while the absence on military duty of so many of our permanent Civil Surgeons is an undoubted handicap which the good work done in Nowgong and Kamrup by the officiating Civil Surgeons cannot wholly neutralise. As was remarked in last year's report, the number of vaccinators employed is in most districts insufficient. The question of increasing their numbers has been taken up in detail with district Civil Surgeons, but pressure of other work has delayed the submission of my proposals in this connection, which will however shortly be available.

Correspondence.

INFLAMMATORY CONDITIONS DUE TO CALCIFIED REMAINS OF GUINEA WORMS.

To the Editor of THE INDIAN MEDICAL GAZETTE.

SIR,—Would you be so good as to draw attention in your next issue of *The Indian Medical Gazette* to the following omissions which occurred when publishing my note on "Inflammatory Conditions due to Calcified Remains of Guinea Worms"—Vide *I.M.G.*, August, 1918, page 297.

In para. 7, after the word "operation", the following sentence should be inserted—"The structure of the cord is diagrammatically illustrated in Fig. II." The explanation of the lettering in Fig. II has also been omitted. It is as follows:—A. Transverse Section; B. Longitudinal Section; a. Fibrinous sheath; b. Semi-solid, chalky layer; c. Hard, calcified, broken up, central axis. I need hardly mention that Fig. I has been printed upside down.

Yours, etc.,

BASRA,
October, 1918. }

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A SUGGESTED ANTIDOTE FOR SNAKE AND SCORPION VENOM.

To the Editor of THE INDIAN MEDICAL GAZETTE.

SIR,—The following are reference notes on experiments on scorpion poison carried out in Manchuria, forwarded by the D. A. D. M. S., Meerut Division, through the A. D. M. S., Meerut Division, No. 43123/1/M, dated 10th September, 1918.

Experiment as to the chemical nature of the poison of scorpions has recently been carried out in Manchuria—the species of scorpion is not stated.

The results are thus summarized:

1. The poison is a protein.
2. Two kinds can be distinguished: one soluble in water, the other in dilute acids and salt solution.
3. Two kinds of crystals can be obtained, and if the poison is decomposed by trypsin, others like glucine and tyrosin.
4. The poison is destroyed by:—

- (a) Pepsin,
- (b) Trypsin,
- (c) Pot. permanganate,
- (d) Calcium hypochlorite.

Instead of calcium hypochlorite, why not the dibasic hypochloride, or what is practically chlorogen (Nesfield's formula)? It is certainly a more practical and possibly a more efficient antidote than calcium hypochlorite for scorpion venom, and for other animal virus as well, such as snake venom and, possibly, rabies; I make the suggestion for what it is worth and for these reasons.

Dibasic hypochloride—chlorogen (Nesfield's formula)—is or should be in every hospital and household throughout

India. I have had occasion to experiment with this as a water sterilizer and find that it is everything that is claimed for it. It is more efficient than calcium hypochlorite in that it is

(a) More soluble,

(b) Has a higher chlorine content,

for intravenous injections when made up with saline solution. 5. As already said, it is always to hand. The officer's Mespot. pattern is little larger than Brunton's snake lancet.

Scorpion and snake venoms are, it would appear, of much the same constitution. The latter (including both the colubrine and viperine varieties) are, to the best of my recollection, albumoses, differing from one another only as regards the proportions of albumins and globulins present.

It is sufficient to know that chlorine destroys these animal poisons.

I know not the chemical composition of the virus of rabies. It is alleged to be the toxin of a germ as yet undiscovered—in animal. The value of chlorogen as an antidote for this virus can readily be proved or otherwise undertaken by the laboratory experiment.

For scorpion and snake-bite, also rabies, I would recommend hypodermic injections of the saline eusol solution (made from chlorogen) at several points below the ligature, and intravenous injection of this above, in addition to other treatment.

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HOOKWORM DISEASE AMONG LABOURERS IN THE TEA GARDENS OF THE DUARS.

To the Editor of THE INDIAN MEDICAL GAZETTE.

SIR,—I beg to send you notes on ankylostomiasis and the conclusions I have arrived at after two years of close study of the disease on a tea garden in the Duars, and which you may care to insert in your valuable paper.

(1) That over 80 per cent. of the coolies employed in the tea garden are infected with hookworm. A larger percentage even than that are female workers.

(2) The general health condition and working capacity of the tea garden labourers are being undermined by hookworm infection; and although the garden shows a fairly good number of coolies on the roll books, not more than 45 or 50 per cent. of the number are regular workers. This is principally due to hookworm infection.

(3) Mortality among infants is to a great extent caused by hookworms. I quote the report sent from this garden to the Civil Surgeon, Jalpaiguri, in connection with the Jalpaiguri Labour Act:

"Death rate among infants is high owing, in a great number of cases, to the mother being in indifferent health at the time of delivery, caused by ankylostomiasis, and the child born in a weak state."

After a careful study of the labourers, with whom I came in close contact daily, I have come to the conclusion that the coolies are gradually losing stamina, and from careful records kept of cases treated for hookworms I have proved that the working and wage-earning ability of the labourers can be greatly improved upon. This is confirmed by the manager of the garden and the medical officer.

The infection is without a doubt spreading and, unless something is done, in a few years' time there will be not a labourer who is not affected.

Treatment.—I approved the following (a combined) treatment, which is quite efficient and safe. I used more than 500 doses, with good result, and without any bad effect.

After the usual preliminary treatment (which is quite difficult here without hospital cases) 30 minims of pure chloroform and 30 minims of oil of eucalyptus are given, along with an ounce of castor oil, early in the morning; and half an hour after, another 25 or 30 minims of pure chloroform and 25 or 30 minims oil of eucalyptus, according to patient's condition, with one ounce of castor oil and 20 minims of oil chenopodium. Often 2 ounces of castor oil has failed to open the bowels, in which case epsom salts was also given.

In a very few instances the coolies were not able to work the next 2 or 3 days, owing to debility and dizziness. Some patients reported to me that next day they passed lots of worms, large and small, in their stools. These patients had already passed worms under observation.

Often round and tape worms are expelled by this treatment.

Yours, etc.,

N. C. BOSE, L.M.P.

JALPAIGURI.