

of at least two weeks. The small number of patients whose symptoms persist for 18 months or more can usually be cured by operation. The operation is a minor one, but it is seldom necessary. For details of its performance the inquirer is referred to the textbooks on operative orthopaedic surgery.

NOTES AND COMMENTS

Brucella Abortus in Milk.—Dr. J. COUTTS MILNE (Farnham, Surrey) writes: In practice investigation on the farm of the problem of *Br. abortus* in milk is not always so easy as would appear from the reply in "Any Questions?" (July 26, p. 260). By the time one becomes aware that tuberculin-tested, unpasteurized milk contains *Br. abortus* the herd is probably well infected and possibly has been vaccinated with S.19, so that the "ring" test may be of only limited value. The intermittent excretion of *Br. abortus* in the milk adds to the difficulties. I understand, too, that the ring test, although valuable for group and herd-pooled samples,¹ is not now considered of much use in testing individual animals. The obligation to take action rests with the medical officer of health, usually under Section 20 of the Milk and Dairies Regulations, 1949, which empowers him to serve notice for heat treatment if he is satisfied that the milk is infected with disease communicable to man.

REFERENCE

¹ *Monthly Bull. Minist. Hlth Lab. Serv.*, 1956, 15, 85.

Treatment for Roundworms.—Dr. L. G. GOODWIN (Wellcome Laboratories of Tropical Medicine, London, N.W.1) writes: May I respectfully disagree with parts of the answer given to the question on the treatment for roundworms ("Any Questions?" July 26, p. 260)? (1) Hexylresorcinol is not nowadays used very extensively for removing roundworms. Like tetrachlorethylene, it stimulates them before they die.¹ Unless given in cachets, the drug erodes the buccal mucosa; when given as an enema it has been known to strip large flakes from the rectal mucosa. What it does to the human gastric mucosa when administered in cachets has not been observed. (2) It is true that a dose of 1 g. of hexylresorcinol is a little less expensive than 4 g. of piperazine if the drugs are purchased as chemical substances. Nevertheless, the dispensing fee for the preparation of cachets costs the National Health Service 4s. (*Drug Tariff*, April, 1958); the total cost of a prescription for a dose of hexylresorcinol is about 4s. 4½d. A dose of elixir of piperazine citrate *B.P.C.* containing 4 g. of piperazine, together with the dispensing fee of 1s. 2d., costs about 1s. 8½d. The only proprietary preparation of hexylresorcinol listed in *The Retail Chemist* trade price list (1958) is from four to six times as expensive as proprietary elixirs and tablets of piperazine. (3) The *British Pharmaceutical Codex (Supplement, 1957)* states that 300 mg. of piperazine adipate is equivalent to 250 mg. of the hexahydrate. The doses of 25 mg. per kg. of adipate and 50–75 mg. per kg. of hexahydrate recommended in "Any Questions?" are therefore far from equivalent in piperazine content. It has been shown² that a suitable single dose of piperazine for the expulsion of roundworms contains 4 g. of hydrate and that the choice of salt is not important. This dose can be given to all except very small children. It is unnecessary to starve the patient before treatment or to purge him afterwards. Small children are sometimes admitted to hospitals in the tropics with toxæmia, vomiting, and convulsions caused by massive *Ascaris* infections. These patients are often severely dehydrated, and it is important that the fluid and electrolyte balance should be restored by parenteral drip therapy before anthelmintics of any kind are administered.

REFERENCES

¹ Goodwin, L. G., *Brit. J. Pharmacol.*, 1958, 13, 197.
² — and Standen, O. D., *Brit. med. J.*, 1958, 1, 131.

Dr. MARY A. HARVIE (Hamilton, Lanarkshire) writes: I agree with your expert ("Any Questions?" July 26, p. 260) that in the treatment of roundworm infection there is little to choose between hexylresorcinol and piperazine adipate or hydrate. Your expert does not mention oil of chenopodium, which I have found to be much more effective than either of these in India. We give oil of chenopodium, 2–5 min. for children, and 10–12 min. for adults, followed an hour later by a saline purgative. I have never met with any ill effects, even in pregnant patients.

OUR EXPERT replies: Dr. Goodwin's authority for stating that hexylresorcinol is not nowadays extensively used is open to question. Throughout the tropics generally it is probably the most commonly used single drug for this purpose. It is true that it irritates mucous membranes, but many cases have been encountered in which cachets have even been chewed without markedly untoward results. During the past 10–20 years the drug has been used extensively and has come to be known as one which

is very reliable and singularly free from side-effects. Concerning the second point, Dr. Goodwin falls into the error of presuming that the *British Medical Journal* is read only by doctors practising in the National Health Service. The majority of those who both read the *Journal* and commonly treat roundworm infections are resident overseas, where to put the drug into a cachet is as convenient and about as cheap as it is to dispense it in a bottle. Regarding the third point, the dosage of piperazine adipate given in the answer is that recommended by the makers, and, although lower than that recommended by the makers of the citrate and hexahydrate salts, it has been found to be effective. Concerning the final point, when vomiting and convulsions occur in association with ascariasis they almost invariably result from intestinal obstruction rather than from toxæmia caused by the worms' products. The treatment of such obstruction is a subject which is quite outside the scope of the original question.

In answer to Dr. Harvie's letter, oil of chenopodium is very much more toxic than either hexylresorcinol or piperazine compounds and for this reason is not recommended.

Thermometer Hygiene.—Dr. W. M. PENNY (Beckenham, Kent) writes: A convenient disinfectant for thermometers, which does not remove the colour from the figures, is acid. carbol., 1 in 20. An ounce (28 ml.) bottle of this, carried in the ticket pocket, may be used for cleansing and the thermometer itself kept in a glass thermometer-case containing the same solution.

OUR EXPERT replies: Unquestionably 5% phenol is an adequate disinfectant, but there is a risk of caustic effect if the thermometer were inadvertently used without being first rinsed free from it, and it has a solvent action on the colouring matter in the graduations. It is mainly for the latter reason that phenolic disinfectants have been considered unsuitable for this purpose. J. B. M. Green and J. B. Penfold¹ write of 5% phenol: "... it tends to remove the figures from the thermometer and patients dislike its taste." One of the largest manufacturers of clinical thermometers in this country tells me that recent improvements in the material used for filling the graduations have rendered it more resistant to solvent action, and this no doubt accounts for Dr. Penny's more fortunate experience, but they still do not recommend that thermometers be actually stored in a solution of phenol: they should preferably be immersed for a long enough period for disinfection (10 minutes should suffice) and then removed from it.

REFERENCE

¹ Green, J. B. M., and Penfold, J. B., *Lancet*, 1947, 2, 89.

Corrections.—Dr. R. B. COLES (Northampton) writes: May I correct a small misunderstanding in your report on my occasional paper on warts (August 2, p. 311)? I have not yet organized 100 wart watchers. We have 12 colleagues reporting on warts at the moment, but we are hoping that other people interested in warts will join us.

It has been brought to our attention that the medico-legal report entitled "The Forgotten Swab" (*Journal*, June 14, p. 1425) stated at line 10 of the second paragraph of p. 1426 that 17 swabs used as mopping packs in the course of the emergency operation had no tapes attached. We understand that all packs used at the Nairobi European Hospital have double tapes some 4–6 in. long firmly sewn on to one corner, and it was Spencer Wells forceps which were not attached to the swabs in question. We regret that this incorrect statement should have been made. We are also informed that an appeal against Mr. Justice Miles's decision has been filed for hearing in November, 1958.

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