

I am informed by my ward sister, to whose careful observations I am largely indebted, that since we have adopted the plain-water enemata the patients have been altogether more comfortable and much easier to manage than under the old régime of small nutrient enemata. I am quite satisfied that the general condition of the patients is at least as good, if not better, and that recovery takes place as quickly, and I may add that since I first adopted this treatment in November, 1902, I have not once had occasion to order a nutrient enema and have not once met with an untoward symptom in any of my cases.

It is a good plan to begin with a five- or six-ounce enema, increasing the bulk each time by one ounce until ten ounces are easily retained. I have not found it necessary to go beyond this. The enemata are given every four or six hours according to circumstances. In most cases it is possible to supplement the enemata by giving small quantities of peptonised milk by the mouth before the end of a week but in several instances my patients have had nothing whatever by the mouth for ten days or a fortnight, and in one or two cases for nearly three weeks, without making any complaint or giving any indication that they were any the worse for their prolonged abstinence. To sum up, the method here advocated gives results at least as good as the ordinary nutrient enemata. It is far simpler to carry out, it is decidedly more bearable for the patient, and incidentally it does away with the unpleasant and offensive daily wash out.

The results obtained with enemata of plain water suggest some interesting reflections on the value of the foodstuffs of the ordinary nutrient enema and the absorptive power of the rectum but this is hardly the place to discuss these points.

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ANKYLOSTOMIASIS.¹

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THE subject of my paper is, it seems to me, one that must peculiarly appeal to a medical society situated in a colliery district. The disease ankylostomiasis is one that the majority of the members can know little of and that only from reading. I find in Taylor's "Medicine," sixth edition, 1901, that the disease is unknown in England and in the second edition of Quain's "Dictionary of Medicine" the same appears, so we err in good company. My own attention was first drawn to the matter about 12 months ago in connexion with the appearance of the disease in Cornwall and since then I have taken a deep interest in the subject and have done all I could to interest others. I take it we may at any time have to deal with the pest and those of us with colliery sick clubs will have to give freely their time and labour in curing the victims of the ailment. It is difficult to cure and the ankylostomum duodenale once introduced into a colliery is very difficult to destroy. In England the Government, the colliery proprietor, and the collier through his union have seriously taken up the subject. The *Colliery Guardian* sent a commissioner (Mr. Salter) to study the disease in Westphalia and his report is issued as a supplement and a second edition appeared about a month ago revised by Dr. Haldane. The latter was sent to Westphalia and Cornwall by the Home Office and his reports have been issued as blue-books. About three weeks ago the Home Office issued a memorandum on the mode of detection of the ovum of ankylostomum duodenale.

You will notice the first paragraph begins: "It is considered by Dr. Haldane not improbable that worm disease already exists in other mines in Great Britain besides those which are infected in Cornwall." My own opinion, and I advance it in all humility, is that we have had it in our own district, if not present now, but that fortunately for us the ovum did not find a suitable nidus—viz., air, moisture, and a temperature over 60° F. We have collieries here in which we could find some, if not all, of these requirements.

The ankylostomum is a nematode worm, the male being one-third of an inch long and the female about half an inch long; it infests the jejunum and not the duodenum. The female lays an enormous number of eggs which can only become larvæ after their discharge in the fæces. Then, with a high temperature, absence of sunlight, presence of oxygen, and moisture, the eggs hatch in a week, producing free larvæ. Experimentally it has been proved that ova and free unripe larvæ are, when swallowed, unable to develop into adult worms. In a matured stage they become productive on entering the small intestine. Antiseptics so far are of very little use. Deprived of oxygen or exposed to sunlight they die. In ordinary water they live for long periods but drying kills them at once. Dr. Stockman says they live for about six years. The human intestine is its only known host.

The symptoms of the disease are those of anæmia in a serious form: pallor, palpitation, dizziness, dyspnoea on exertion, loss of appetite, and sometimes diarrhoea or melæna. In Cornwall an irritable pustular skin eruption, locally known as "bunches," has been found. Though not often fatal it will be easily understood why the afflicted are incapable of work. I ought to mention here that a great number of men have been found to be infested with the worm and yet show no symptoms of anæmia—a fact that tends to confirm my own impression that men returning from service in India, Egypt, and South Africa must have brought the worm here. It is recognised that these men constitute an almost equal danger with the others. Until very recently we were led to believe the pallor of the body was due to hæmorrhage and the worms sucking the blood from the intestine. Dr. Haldane and Dr. Boycott, in the *Journal of Hygiene*, prove that it is not so. Measurements made by them show the anæmia to be due to a great increase in the total volume of the blood with a corresponding dilution of the hæmoglobin and in consequence the fainting, dizziness, and palpitation are caused by the defective aeration of the tissues, and the heart in particular, the condition being analogous to that of poisoning by carbon monoxide.

I need not go into the treatment, which in England has been thymol and in Germany male fern, though a number of other drugs have been tried. What we ought to do is to try to improve the sanitary conditions of our collieries. You all know that underground, with a very few exceptions, nothing is done. A collier is free to go where he likes. He fouls his hands and eats his food at his work and indeed often enough at home he will not wash them before taking his dinner. No one asks that he shall have a lavatory in his working place but he ought to have suitable pails placed at convenient points in and about the workings. The pails should be brought to the surface daily and their contents burned in the furnace, run into a cesspool, or spread on the land. A great number of closets, water-closets where possible, must be provided on the surface and possibly some day there may be a bath on the surface. In Germany every collier has to have a bath at the colliery and to change his working clothes for others before he is allowed to leave the works. Lastly, I contend that every colliery ought to have a supply of pure fresh water not only on the bank but in the pit. How many times have you seen wounds that have been washed with tea because no other fluid was to be had.

Hindley.

TRANSPLANTATION OF TENDON FOR MUSCULO-SPIRAL PARALYSIS.

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THE following case presents some remarkable and interesting facts.

A boy, aged 16 years, fractured his right humerus and by a fall during convalescence the fracture was made compound. Thereafter the musculo-spiral nerve became included in the callus. To free this, operation was performed and apparently, judging from the resulting paralysis, the nerve must have been severed during the manipulations. Further operations were done to improve matters but without success. Two years after the last operation the boy came under my care. At that time musculo-spiral paralysis was complete. He

¹ Presidential address read before the Wigan Medical Society on April 14th, 1904.