Illustrations

OF

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. GEORGE'S HOSPITAL.

OBSERVATIONS ON THE TREATMENT OF TÆNIA, ESPECIALLY BY THE USE OF THE OIL OF MALE-FERN.*

By JOHN W. OGLE, M.D., F.R.C.P., Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

At page 960 of the second volume of the *Elements of Materia Medica and Therapeutics* (3rd edition), by Dr. Pereira, that authority, speaking of the oleum filicis maris, observes as follows: "The dose is from half a drachm to a drachm, in the form of electuary, emulsion, or pills: an hour afterwards, an ounce or an ounce and a half of castor oil should be exhibited. . . . *I have tried it in several cases of tapeworm, but without effect.*"

It is with reference to the latter statement by Dr. Pereira that, seeking to add to the information which various authors have supplied on the matter, I have put together the following observations regarding certain points related to the treatment of that form of the tenia which we meet with the most commonly in England. These I am enabled to give in connexion with short

notes which I am in the habit of making of any cases amongst my hospital out-patients which may appear to offer more than ordinary interest. From what follows, it will be seen that I have generally given the oil of male-fern in doses varying from half a drachm to two drachms, considering a fair medium dose for the adult to be about a drachm and a half. In almost all cases this has been administered in combination with the acacia mixture of the *Pharmacopœia*, and in some aromatic vehicle (chiefly pimenta or peppermint-water) on a fasting stomach. This draught has been ordinarily given at bedtime, and followed up, on the following morning, by a dose of castor oil or "haustus sennæ". It will be remarked that, as Dr. Gull observed in a paper in the *Guy's Hospital Reports* (vol. i, p. 1, 1855), there is probably no absolute necessity for the dose of castor oil or senna, inasmuch as the male-fern oil is sufficient in most cases both to poison the offending worm and summarily to lead to its disposal. Its administration is, however, perhaps desirable, in order the more strictly to secure evacuation of lingering portions of the worm, if such there may be.

In the following tables, consisting of an epitome of twenty-four cases, I have not sought to give the symptoms accompanying the presence of the worms in the bowels, nor in any way to arrange the cases. I have merely, in an indiscriminate manner, recorded them with reference to the age of the patient, the length of time for which the worm was known to exist, the character of the previously used remedies, and the doses of the male-fern oil used, with the results following its administration; in this, observing the order adopted by Dr. Gull in his paper before quoted. The results of an examination of these details are given at the close of the table.

No.	Age.	Duration of symptoms; habits of life.	Former remedies used.	Dose and effect of the male fern.
1	32	Tape-worm known to have existed ten years.	Had taken turpentine as many as twenty times; and as much as twelve yards of the worm passed at a time in consequence. Had never known the head to pass.	Castor oil, 1 oz. at bed-time. In the morning, oil of male-fern, 2 drachms; acacia mixture, 3 drs.; peppermint water, 2 oz. Twelve yards of the worms passed five hours after the draught with male-fern. "Nothing unpleasant" to the patient in the action of this medicine. The worm "ran from a large thickness to quite a small point." The small part was said "by those who had seen others to be the head and tail."
2	16	Was under my care for tenia three times, on each occasion with an interval of about two years. After each visit, he failed to appear at the hospital until necessity compelled him. Not seen since last visit.		When first seen, the following draught was given:—Oil of male-fern, 2 drs.; acacia mixture, 3 drs.; peppermint water, 2 oz. Eight yards of the worm were evacuated shortly afterwards. On second visit, a similar dose; 25 yards evacuated by it. On third visit, a similar dose; but he has never been since to the hospital. No head ever brought.
3	28	Tape-worm known for eighteen months.	Had taken turpentine.	Oil of male fern, 2 drs., with acacia mixture and pimenta water at night; an ounce of castor oil in the morning. About 30 yards of tape-worm passed shortly after the castor oil, without uncomfortable effects.
4	45	Tape-worm known to have existed eighteen months.	Had been in the habit of taking every second week 3 grains of calomel at bed-time and 5 drops of turpentine in water next morning, with the effect of bringing away about from 200 to 300 pieces for the next two or three days.	Oil of male-fern, 2 drachms, in decoction of quassia and acacia mixture at bed-time; castor oil in the morning. No worms were passed after these doses. They were therefore repeated, and then 5 yards were brought away. Two doses were subsequently given, but no more passed, though their action was abundant. No complaints as to the medicine.
5	46			Oil of male fern, 2 drachms, with acacia mixture and pimenta water at bed-time; castor oil in the morning. Large "tape-worm" brought away shortly after the draught.
6	14	Tape-worm known to have existed about eighteen months.	Passed two large tape-worms a year ago after turpentine and castor oil. Two drachms of turpentine with acacia mixture and mint water given recently, but without effect.	Oil of male-fern, 2 drachms, in mint water and acacia mixture at bed-time. A very large tape-worm was passed shortly after the fern draught. The head was looked for by the patient, but not found, "though very near it."
7	20	Tape-worm for many months, and passed three within the last six months.		Oil of male-fern, 2 drachms, in acacia mixture and pimenta water at bed-time; castor oil the next morning. "Large tape-worm" passed 12 hours after the castor oil.
8	13	Tape-worm known for two years; passed one two months ago, of eight yards in length; and another, of the same length, one week previously. Whether the head had been expelled on either of these occasions, was unknown.		Three doses of castor oil on alternate nights; and 1½ drachm of oil of male-fern in acacia mixture and pimenta water on each of the following mornings. No tape-worm passed after any of these doses.

* Being part of a lecture delivered at St. George's Hospital.

TABLE (continued).

No.	Age.	Duration of symptoms; habits of life.	Former remedies used.	Dose and effect of the male fern.
9	21	Tape-worm known to have existed eighteen months. Not known to exist in other members of the family. Not in the habit of taking ham or bacon or sausages.	Has taken oil of turpentine on two occasions. No worm brought away by it; but "the water stopt" each time.	Oil of male-fern, $1\frac{1}{2}$ drachm, in pimenta water and acacia mixture, followed by castor oil. Ten feet of the worm evacuated after the castor oil had been taken. The draught was repeated, but no more of the worm expelled.
10	21	Tape-worm known for four months.	Taken "all sorts of medicine" without effect, including turpentine.	Half an ounce of castor oil at bed-time. Oil of male-fern, $1\frac{1}{2}$ drachm, in pimenta water and acacia mixture next morning. Several yards of the worm passed, "one end being very small indeed."
11	57	Symptoms, such as pain and gnawing at the epigastrium, voracious appetite, etc., for six months; but no tape-worm or parts seen, though suspected. No members of the family known to have it.		An ounce of castor oil at night. Oil of male-fern, 2 drachms, in pimenta water, etc., next morning. In less than four hours after the fern draught, six yards of the tape-worm were passed. Patient was "made ill all over" and "so weak and trembling" by the draught. It acted four times, and the worm passed after the last evacuation. Head looked for, but none found. No more tape-worm seen afterwards.
12	40	Tape-worm known for nine years.	Had taken turpentine and castor oil without any result; no worm being voided by it.	Oil of male-fern, 2 drachms, in pimenta water and acacia mixture at night; castor oil next morning. Fourteen yards of tape-worm passed two hours after the fern draught. The castor oil brought away about twenty-four disjointed segments.
13	42	Tape-worm of "two or three years standing."		Senna draught immediately. Oil of male-fern, 1 dr. in pimenta water, etc., at bed-time; and repeated next morning. Eight yards passed after the second dose of the fern oil. Turpentine and castor oil given afterwards, but no more tape-worm passed.
14	20	Tape-worm several months.		Oil of male-fern, $1\frac{1}{2}$ drachm, in pimenta water. Six yards of the worm passed about an hour and a half after the draught.
15	10 $\frac{1}{2}$	Tape-worm known above a year and a half ago; and twice brought away within that time.	Had for a time taken compound scammony powder on alternate nights. Also some powder with calomel, and turpentine and castor oil, repeated four times without result.	Oil of male-fern, 20 minims, in acacia mixture, 2 drs., and pimenta water, 6 drs., at bed-time. Half an ounce of senna draught in the morning. A "very large" tape-worm passed shortly after the senna was taken.
16	38	Tape-worm known for one year. Had four brought away, of which one was twenty yards long.		Oil of male-fern, $2\frac{1}{2}$ drs.; acacia mixture, 4 drs.; pimento water to $1\frac{1}{2}$ oz., at bed-time. Castor oil, 1 oz., next morning. "Large worm" brought away before the castor oil was taken. The fern oil draught caused pain in the bowels one hour after it was swallowed, but nothing more.
17	20	Tape-worm known for eight months. One passed of two feet in length.		Oil of male-fern, 2 drs., acacia mixture, 3 drs., peppermint water to 2 oz., at bed-time. Castor oil next morning. Several yards of worm passed before the castor oil was taken.
18	3 $\frac{1}{2}$	Tape-worm known for one year. Four months ago passed a worm of four yards in length, after taking the syrup of senna. Fragments seen daily.	Syrup of senna, without any important result.	Oil of male-fern, half a drachm, in pimenta water, at bed-time; 3 drachms of castor oil next morning. The result not known.
19	20	Tape-worm known for two years.		Oil of male-fern, 2 drs., in pimenta water and acacia mixture at bed-time; castor oil, 1 oz., next morning. A "very long" tape-worm passed ten hours after the fern draught, and before the castor oil was taken. No uncomfortable effects.
20	21		Had taken a drachm and a half of kamala powder, followed by castor oil; but only a few segments of the worm brought away.	Oil of male-fern, 2 drs., in pimenta water and acacia mixture at bed-time; 1 oz. of castor oil next morning. About $3\frac{1}{2}$ yards of the tape-worm brought away after the castor oil was taken. The draught and the oil were repeated; and about the same length of the worm evacuated. The draught and oil were given a third time, and "another long worm" passed.
21	26			Oil of male-fern, 2 drs., in pimenta water and acacia mixture at bed-time; castor oil in the morning. "Two strings of three or four yards each" of the tape-worm passed before the castor oil was taken.
22	21	Tape-worm several months.		Two drachms of oil of male-fern in pimenta water brought away a "large number" of the joints. Thought herself well. Not seen again for 3 months, when the "worms returned." Took $2\frac{1}{2}$ drs. of the oil at bed-time, and a "very large" tape-worm brought away before the castor oil was given on the following morning.
23	34	Tape-worm known to have existed above four months; and three or four feet had been passed at a time without medicine. Accustomed to eat much bacon, but no raw meat. Not known to exist in any other members of the family.	Had taken gin and rue on a fasting stomach, but only a few occasional joints of the worm passed afterwards. Took the oil of turpentine and castor oil after colocynth pills, and a quantity of yellow stuff brought away like the yolk of an egg, but in a "stringy state".	One ounce of castor oil at bed-time; and on the following morning, two drachms of the male-fern oil with acacia mixture and pimenta draught. The castor oil acted twice before morning, but no worm was passed. Three hours after the male-fern draught was taken, the bowels acted five or six times, and six or seven feet of the worm were voided, but no head was discoverable. There was "a good deal of pain" in the abdomen before the worm came away, but none afterwards. The back has, however, been weak since. The castor oil and male-fern draught were again given, but no fragments of the worm parted with.
24*	56	Tape-worm known to have existed for upwards of a year.	Had taken "every kind of medicine".	One ounce of castor oil at night, and a drachm and a half of the oil of male-fern with the mucilage and water the following morning. A very large tape-worm was evacuated in the course of the day; and now, for above a year, there has been no return.

* This case was not a hospital one, but that of a private gentleman, to whom, at my recommendation, my colleague, Mr. Tatum, gave the oil of male-fern.

On reviewing and considering the above table of cases, it will be at once obvious that the oil of male fern was, at any rate, most useful in causing the death and expulsion of long lengths of the worm. In many cases, the patients had not measured or estimated its length; but it will be seen that in one instance the worm expelled had been twenty-four yards long (Case 2), and in another no less than thirty yards long (Case 3). In a few instances, the existence of the worm had been known for a number of years, as for nine years (Case 11), for ten years (Case 1), etc.; but, in the average number of cases, they had been experienced from between one and two years. The ages of the patients will be seen to vary from 34 to 57 years.

I regret much that my information is so deficient as to whether or not the root of the worm—the anchoring part, as Dr. Gull aptly terms it—that commonly termed the head—had been passed. In two cases (1 and 6), it is most probable that the head or root was passed. The extremely small size of this, the attached extremity of the worm, the carelessness and inefficiency with which it is of course often sought for, the scanty domestic accommodation enjoyed by the poor, are all circumstances which may fairly be supposed likely to obscure our attempts at determining whether this part has been at any time voided along with the general mass of the worm. I can entertain no doubt that the fine and comparatively pointed termination of the *tænia* is often got rid of—the entire worm, in fact, passed—without the fact being absolutely established.

As respects the action of the oil of male fern, the table, I think, shows pretty well what may be expected of it.* Out of the whole of the twenty-four cases in which it was given, in only two cases was there any doubt as regards its poisonous and expellent action on the intestinal worm; and in one (Case 8), seeing that eight yards had been passed but a short time previously, it is not unlikely that there was no worm to be expelled.

As regards the period at which, after the male-fern oil had been swallowed, evacuation of the worm was produced, it appears that out of the twenty-four cases (excluding the two cases 4 and 8, before denominated as being doubtful as regards the action of the male fern, and one case, 18, in which no information whatever upon this point was gathered from the patient), in twelve cases the worm was expelled within a short time after taking the remedy, and before the castor oil or other subsequent dose was given; in one case (13), it brought away the worm in one hour and a half after having been swallowed; in another case (18), in two hours afterwards; in another case (23) in three hours.

Touching the action of the remedy upon the patient, irrespective of its vermicide and vermifuge properties, it will be seen that, in by far the majority of instances, this action was not in any degree or manner troublesome or disagreeable. In Case 10, the patient, aged 21 years, was described as having been rendered “very ill” by the medicine; in Case 11, as being made “ill all over”, “weak, and trembling”; in Case 23, a “good deal of pain” was complained of when the worm was voided; and in Case 16, pain was experienced in the bowels about an hour after the male-fern had been taken. But, in by far the majority of the cases, it is expressly stated that no discomfort resulted from the medicine; and in none other were any complaints of it made. In Case 11, that wherein so many unpleasant effects were experienced during the action of the drug, it is noticeable that the worm was only expelled after four doses had been taken.

Cases 1, 10, and 12 would appear to show as decided

a superiority in the vermicide action of this medicine, compared with turpentine, as it is superior on the score of taste and agreement, etc.*

Such are the results which may be elicited by a consideration of the table, regarding the utility of the oil of male-fern in the treatment of *tænia*. I hope to continue to give this remedy in such cases; taking care, if possible, to learn all particulars regarding the mode of life, kind of food used by patients, and specially with reference to the eating of raw meat, ham, bacon, sausages, etc.† I shall also take the precaution, which I would recommend to others (following the custom adopted with the nurses at Guy's Hospital), of promising a premium upon every “root” or head of the worm brought to me by the patient, so as the better to secure them; and, when possible, to admit the patients as in-door patients for a day or two, for the purposes of observation.‡

I will now pass on to make one or two observations which my notebook suggests respecting the uses of other remedies in tape-worm. Thus I find, amidst a great number of other cases of which I have record (but so imperfect in various ways that I could not adduce them along with those placed in the table), that the oil of male-fern has certainly acted vigorously and abundantly in the destruction and expulsion of long lengths of the *tænia* when the *kamela* (written also *kamayla*, *kamala*, and *kamela*) has failed. The form of *kamela* which I used was the tincture, two drachms being the medium dose for an adult. In one case—a child, aged 4 years—after in vain trying the tincture of *kamela*, forty drops of the male-fern oil, in mucilage, syrup, and mint-water, caused the expulsion of ten yards of the worm within three or four hours after the medicine had been administered.

I have also given the powder of the *rottleria tinctoria*, in about two-drachm doses, mixed with honey or mucilage, with the effect of expelling lengths of the *tænia*. In this dose it has been longer, for the most part, before producing its specific action, than the male-fern oil. In one case in which I gave the *rottleria tinctoria*, it is not unworthy of remark that the patient complained that, when the *tænia* caused intestinal irritation, in addition to a “mistiness in eye-sight”, a gnawing pain at the upper part of the abdomen and pain in the forehead, he very frequently experienced “red blotches”, to use his own expression, on the forehead and nose. In this case, I find from my notes that no sickness or uneasiness ensued on taking the *rottleria tinctoria* powder. In other cases, also, this drug has been noticed as acting without griping or discomfort of any kind.

Again, I have given the *kousso* in ample (half-ounce) doses, but with variable (in some cases quite unsatisfactory) results; also the *santonine*, with, as yet, negative results. But I have reason to think that my doses of the latter drug have been too small for the purpose. I propose trying it in larger quantities. I believe it may be safely given in ten or fifteen grain doses.

On one occasion, I found that a two-drachm dose of the extract of *taraxacum* brought away a large number of the *tænia* joints, the presence of which within the intestines had been unsuspected. It is possible that this vegetable may be rendered available, in suitable doses

* I am having capsules containing the oil of male-fern made by Messrs. Bullock and Reynolds.

† I cannot forbear referring to a case related in *Virchow's Archiv*, Bd. xxv, and quoted by myself at page 255 of the number of the *British and Foreign Medico-Chirurgical Review* for January 1863, in which the existence of trichinæ in the body might probably have been connected with the patient's frequent habit of killing pigs and placing the bloody knife in his mouth, in addition to his custom of eating sausages, etc.

‡ Dr. Hyde Salter tells me that he takes the precaution of having the feces passed through a muslin bag or sieve, so that they can be most completely scrutinised; and this plan is worthy of imitation.

* Had my notes afforded me all the necessary materials, I should have constructed my table of cases in accordance with the scheme or table drawn up and introduced into this JOURNAL (see November 22nd, 1862) by Dr. Fleming.

and form, for the expulsion of intestinal worms; to which, indeed, all "biters" appear to be inimical. In another case, a tapeworm was expelled after a large quantity of very strong coffee had been drunk.

There is another remedy of which I am about to try the effects, in consequence of its strong recommendation by Friedrich of Heidelberg; and that is the picronitrate of potash (*Kali picronitricum*).*

I may remark, that it would appear that in certain cases there is an attempt on the part of the bowel to dislodge the worm, apart from medicine exhibited. Thus I know of one, a private case, in which for many years the patient has had the tapeworm, and who, every few months, experiences violent griping, with nausea (never vomiting) and diarrhoea, for about half a day, with concomitant expulsion of several yards of the worm. He has never found the root or head of the animal; but he does not appear ever to have sought for it very systematically. In another case of which I have notes, the patient observed that, contrary to what is usually thought to be the case, he had had three worms of large size expelled within a short period of each other, in each of which the head was found. This observation, though stated honestly by the patient, may, of course, have been erroneous.

More than once I have found that the *tænia* and the *ascaris lumbricoides* have existed in the human bowel at the same time.†

With one more remark I will conclude, and it is one which may possibly have a practically beneficial effect; and that is, that I think there may be reason for believing that the *tænia* may be communicated to infants and children from others, and in the following manner. In almost all cases, there is reason to think that a *tænia* does not exist very long within the intestine without portions or joints being passed, not only by stool—i.e., with the *fæces*—but also by their spontaneously working their way through the anus, and "skeddaddling" (to use an expressive Scotch phrase) from the person, adhering to the garments, or falling on the ground. Now, I have known cases in which there is reason to think that these fragments, which soon desiccate, shrivel, and become reduced to a small brownish-coloured mass, may have been picked up by children, often crawling infants, who are ever ready to pounce upon and put in their mouth every crumb or crumb-like substance which they can see, and thus have been introduced into the digestive organs. I have no certainty of this; but I think it is a point worthy of consideration and attention, and one to be mentioned to parents in cases where the *tænia* is known to exist in any members of a family.

I hope shortly to be able, if permitted, to produce through the medium of this JOURNAL some observations with regard to the use of strychnia in the treatment of disease, gathered from hospital notes.

* See the case before quoted from *Virchow's Archiv*, etc.

† On one occasion, a patient was induced from some cause or other to bring me, in addition to the *tænia*-joints which he had really voided, a large earth-worm, which he pretended to have passed along with the other. The deception was recognised without trouble, to the surprise of the patient.

MUNIFICENT LEGACY. The Marquis of Lansdowne, the late Lord-Lieutenant of the county of Wilts, has, by a codicil to his will, bequeathed the handsome sum of £3,000, free of legacy duty, to the Salisbury Infirmary.

CÆSAREAN OPERATION. This operation has been lately performed by Dr. Greenhalgh, at St. Bartholomew's Hospital. Delivery *per vias naturales* could not be effected, in consequence of a tumour attached to the sacrum. The woman was at the seventh month of pregnancy. The child was alive when taken out; but survived only a short time. The mother died about sixteen hours after the operation.

Original Communications.

THE LARYNGOSCOPE AND ITS CLINICAL APPLICATION.

By THOMAS JAMES WALKER, M.D. (Lond.), etc., Surgeon to the Peterborough Infirmary and Dispensary.

II.—INSTRUMENTS EMPLOYED IN LARYNGOSCOPY.

THE instruments which I am now about to describe include not only the very simple laryngoscope itself, but also certain accessory apparatus, which is occasionally required to enable us to throw a sufficiently strong light on to the mirror placed at the back of the fauces; much of the success of laryngoscopic observations depending on the attention which we pay to the illumination of the pharynx. Though the same mirror which we use as a laryngoscope serves to reflect the image of the upper part of the pharynx and the nares, an additional instrument, which we may call a palate-spatula, is required for the examination of these regions; and a combination of this spatula and of the mirror into one instrument constitutes a rhinoscope. The most useful form of this instrument, together with other apparatus for the local treatment of laryngeal, pharyngeal, and nasal affections will be also described.

The laryngoscope is simply a small mirror, placed on a stalk attached to its margin at an angle of from 120° to 150°. The stalk is of metal for about three inches and a half from the mirror; the remainder being a small wooden or ivory handle about three inches long, into which the metallic portion slides. Usually the stalk is straight through its whole length of about six inches and a half, but made of flexible metal in order that it may be bent at the will of the operator; in the margin the laryngoscope is figured which I constantly employ, and I recommend an instrument with similar curves in the stalk as the most useful. (Fig. 2.)

FIG. 2.—Laryngoscope mirror. (The engraver has incorrectly made the handle straight instead of curved, and has represented the angle between the mirror and the stalk too abrupt.)

The mirror itself admits of variety in form and size. Czermak and his pupils use commonly a square one with the corners rounded off and the stem attached at one of the angles; others employ an ovoid mirror, the