CASES
SHEWING THE COINCIDENCE
OF
WORMS IN THE INTESTINES
WITH
HÆMOPTYSIS,
AND
REMARKS ON THE PROBABILITY OF THE TWO
AFFECTIONS HAVING A CONNEXION WITH EACH OTHER.
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COMMUNICATED
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Read June 24, 1818.

THE object of the following pages is to express an opinion, that discharges of blood from the lungs are sometimes produced by the existence of worms in the intestinal canal, and to shew the probability that the removal of them may be followed by a recovery of the injured lungs ; while on the other hand, their remaining the unsuspected cause, might with great probability be followed by a fatal phthisis. The opinion originated from observing the repeated

occurrence of the two affections in the same persons, and was strengthened by other considerations; while some circumstances which will be mentioned, seemed to justify the opinion of their having a relation to each other.

CASE I.

In December 1811, I was desired to see S. H., a young woman about twenty years of age, to ascertain if she were pregnant. She was unmarried, but had lately supposed, and upon oath declared herself with child; and it appeared probable that the period of gestation had expired, as she had spent some months in a female penitentiary, from which she had been discharged, because her enlargement had led to the opinion that she had entered the society in a state of pregnancy. She had now left it for three or four months. When I saw her, she moved with activity, and though looking large, was too small for a woman about to be confined. Her breasts were larger than formerly, yet they had not the appearance or feel of secreting glands. The areola was quite unaltered; the abdomen was large and prominent, not resembling the enlargement from a fluid in its cavity, but was of a more circumscribed form, like that of a distended uterus. The swelling was elastic and compressible, not having the hardness of a gravid uterus. The os uteri was low down in the vagina, and resembled that of the unimpregnated

state. The uterus, examined *per vaginam*, felt as if it contained a large body of fluid. She had a constant discharge like that of the menses, which had now continued six or seven weeks.

1812. February 1. She is in good health, gets no larger, therefore it is certain that she is not pregnant.

June 15. Has had several violent attacks of Hæmoptysis, accompanied with convulsive insensibility and agonizing pain of her side. Her teeth are firmly closed during the convulsion; the blood thrown up is frothy and of a bright red colour, having with it no mixture of the contents of the stomach, or any appearances of its coming from that viscus. She has had cough for many weeks, and seems in great danger of phthisis.

1813. October. Since the last date the Hæmoptysis has returned occasionally, and sometimes in quantities not less than a pint. Finding also that she occasionally discharged portions of a tænia, I prescribed a dose of the oleum terebinthinæ, which operated on the bowels, bringing away a considerable quantity of the worm. The tumefaction went down; the Hæmoptysis returned many times slightly, but at length ceased entirely.

1815. She is reported to be well.

1816. She was again seen in perfect health.

CASE II.

Is stated from recollection ; but was committed to paper while all the circumstances were fresh in the memory, it not being at first known to have any connexion with the subject of this paper.

In the spring of this year 1817, I attended a young gentleman about ten years old for many weeks on account of a diarrhœa, for which he took a variety of aperient and astringent medicines without benefit. He had no fever, and seemed in general respects well, the diarrhœa continuing obstinately to resist the effects of medicine. During the continuance of it, two lumbrici were passed at distant times without appearing to produce any change in the state of the disorder. I was one night called up to him on account of the alarm which a coughing up of blood had produced in the family. The quantity was about an ounce, and certainly came from the lungs. He was bled and had no return of it. Shortly after this attack, a third lumbricus was voided *per anum*, after which, as if the three lumbrici had been the source of the long continued bowel complaint, he immediately began to amend, and rapidly recovered. A very trifling cough was left, which gradually got well. I had an opportunity of witnessing that he remained perfectly well eight months after the recovery. In this instance of Hæmoptysis there

was no spasmodic pain as described in the preceding case.

CASE III.

About three years ago, I was called to see a young woman, aged nineteen, in an advanced state of pregnancy, who was suffering from uterine hæmorrhagy : she was also suffering from a violent Hæmoptysis. She looked pale and thin, and I conjectured that she would fall a sacrifice to pulmonary consumption. She completed her time, was delivered, and resumed her usual employment. I heard nothing more of her until I was called to her in her second labour, which was accompanied with convulsive insensibility. About twelve months after her second delivery I was again called to her, on account of her lying in a state of convulsive insensibility, accompanied by coughing up a large quantity of frothy and arterial blood (certainly unmixed with any contents of the stomach). I bled her largely, and sensibility was restored. Within a short space I was called several times to her under similar circumstances, and always found bleeding of temporary use. Having before remarked the existence of worms in patients affected with Hæmoptysis, I asked if any had been ever been observed by my present patient, and was quickly answered in the affirmative. Some anthelmintic remedies were exhibited, which brought

away several lumbrici ; soon after which I again lost sight of her. Upon her applying to me again at the distance of six months from the before-mentioned period, I found she was troubled with cough, that she frequently brought up blood in the quantity of two or three table-spoonfuls, and that she had passed two lumbrici within the last fortnight. Her appetite was generally good, except that she had a peculiar aversion to meat. I ordered a draught consisting of *ol. terebinthinæ* ʒvi. *aq. menth. pip.* ʒss. to be followed by an infusion of senna if it did not operate. Many stools were procured, and twelve lumbrici brought away. She continued to cough and bring up blood as before, but without any appearance of fever ; nor could I discover that any symptom had been aggravated by the stimulus of the *ol. terebinthinæ*. The exhibition of turpentine was followed by an infusion of chamomile, given with a view to the improvement of the digestive organs ; and on the following day she brought away twelve more worms. She continues still to cough up blood occasionally, but without any attacks of convulsion or insensibility.

September 14. Within the last three weeks she has thrown up blood twice ; still her appearance is improved ; she goes to work in the harvest-field, and has passed only one worm since the last report, from which circumstance it may be presumed, however, that more remain.

October 20. She has parted with nine more worms.

As a farther proof of the occasional co-existence of worms with Hæmoptysis, I am induced to mention the following fact.

J. H. at the age of fifteen years was seized with Hæmoptysis, which recurred very frequently until he attained the age of twenty-five, when he died, I believe consumptive. During many years of his life he was troubled with a tænia, and it was his custom to remove portions of it from the rectum by winding it round a stick, in which way he used to exhibit it. No suspicion was entertained at the time that these two diseases had any connexion.

That Morgagni thought worms capable of producing pulmonary disease will appear from the following quotations: Morgagni, Liber II. De Morbis Thoracis Epist. Anat. Medica, XXI. Art. 43.

“ Verum ideo commemorabam, quod sermo de pleuritide erat eo die in academia institutus ob litteras a Cremonenti medico, dum viveret, experientissimo, qui condiscipulus meus fuerat, Ignatio Pedratto, ad me datas in quibus verminosas pleuritides summa cura describebat, quæ hyeme An.

1705, Farnesii; ubi tunc ille medicinam faciebat, in eaque vicinia epidemice grassabantur.”

And in a former part of the same article, after relating the case of a young man who was affected with symptoms of pleurisy which did not yield to the usual remedies, he says,

“ Denique rejecto inter vomitum sanguineum terete lumbrico, statim ab iis, quæ dicta sunt, omnibus liber est factus.”

Again, *Epist. cit. Art. 46.* “ Ex his quæ a nobis de verminosa pleuritide relata sunt, conjunctis tamen cum iis quæ de eadem supra laudati auctores scripserunt, jam tibi facile apparebit, nulla esse veræ pleuritidis signa, quæ non aliquando in illa quoque sint observata non modo cum jam in veram degenerasset, sed tum etiam cum hujus tantummodo similitudinem referret. Quo magis, in pueris præsertim, itemque in aliis qui soleant vermis esse obnoxii, nec non in iis constitutionibus quæ horum feraces sint cavere medicos, oportet, ne forte pro vera habeant pleuritide aliquam in qua necdum aliud sit, nisi pleuritidis similitudo, solis anthelminticis curanda.”

I have referred to various writers on the subject of worms, and meet with no intimation that they were ever suspected to be the cause of hæmorrhagy from the lungs. I have also referred to va-

rious writers on the subject of Hæmoptysis, and meet with no suggestion that worms had ever occasioned it.

It is indeed mentioned in Brookes's Practice of Physic, Vol. II. p. 220. that a woman who had been long troubled with a *tænia*, and was far gone in a consumption, met with a remedy which removed the worm; but she died of the consumption. So that the coincidence of worms and consumption in the same patient has been witnessed without any apparent suspicion of their alliance.

While the preceding facts had impressed my mind very strongly, that worms in the stomach or small intestines could give rise to an organic læsion of a distinct and distant organ, I fortunately met with a paper of Dr A. P. W. Phillip of Worcester, published in the Transactions of this Society, Vol. VII. Part II. describing a species of consumption which he naturally calls dyspeptic phthisis, in which it is satisfactorily shewn and illustrated that a disordered state of the digestive organs frequently produces phthisis pulmonalis. In perusing this valuable paper, I met with a reference to Mr. Abernethy's Observations upon the constitutional origin of local diseases, in which excellent work I met with the following opinion: "The observations which I have made in surgical cases lead me also to attribute many hæmorrhagies, and particularly those from the nose, to a sympathetic affec-

tion of the heart and arteries, excited by disorder of the digestive organs."

Cheyne, in his cases of apoplexy and lethargy, says, "I have witnessed some remarkable instances of profuse hæmorrhage from the nose preceded by disorder of the stomach and biliary system."

When I had read in the works of authors of such great experience and ability, opinions that a disordered state of several of the viscera of the abdomen, including those in which worms reside, had produced the rupture of blood-vessels and other organic changes, in organs distant and having no direct communication, I perceived that my own opinion was strongly supported by analogy, to the adoption of which, the unconnected state of the affected parts and mechanical nature of the injury had formed some impediment.

An assiduous medical student, diligent in pathological inquiry, (now Dr. Rumsey of Porto,) informed me, that in many dissections of bodies which had fallen victims to phthisis pulmonalis, he almost invariably found the liver as well as lungs in a diseased state.

My attention has also been arrested by accidentally meeting with an extensive tuberculated disease in the lungs and liver of a sheep.

I cannot contemplate these various facts without a very strong conviction, that disease of the abdominal is capable of producing disorganization of the thoracic viscera ; and if it be possible that nervous disorder excited by local irritation could produce Hæmoptysis, there is no species of irritation more calculated to effect it than that of worms in the stomach and intestines, which, it is frequently witnessed, give rise to convulsion, and, as I have known, to epilepsy.

If the cases I have related are considered, they will be found to have a character which does not belong to the more common form of phthisis pulmonalis. The attacks of Hæmoptysis in the first and third cases were attended with convulsion, the former of which ended favourably after the removal of the worm ; both the recovery and convulsion distinguish it ; and though the subject of the latter remains by no means cured, she has continued, with diminished disease, an extraordinary length of time, and is much better at this moment in general health than she was three years ago. In the second case there has been no symptom of consumption except the single attack of Hæmoptysis ; I suppose therefore that in this instance, the rupture of the vessel was not a part of more extensive disease of the lungs, but simply a mechanical breach occasioned by sympathy with a distant local irritation.

The fourth subject led a life of some activity for ten years while labouring under the two maladies.

The motive for communicating the preceding facts and opinion has been chiefly to awaken attention to the subject, in the confident expectation that it will be frequently found that worms produce Hæmoptysis, and that when occasioned by this cause, although there is great danger of consumption, the removal of the cause may frequently be the means of rescuing the subject from this usually fatal malady.

When I sat down to write, I had no other intention than that of delivering my opinion that a connexion subsists between the two affections, and of giving my reasons for it. As I did not consider myself to possess the knowledge of any remedies which the public are not acquainted with, I did not design to enter into the case. I am induced, however, to depart from this intention, because the public experience of one of the most anthelmintic remedies with which we are acquainted, the *oleum terebinthinæ*, has been but short, and I think this a convenient place for adding my own, little as it is, accompanied with what has occurred to my observation on the history of worms.

Their frequency as a disease in my circle of

practice I have thought remarkable. - In a family of eight individuals, I once knew six to have worms, and I have seen a very great proportion of many other families afflicted with them. The poor and middling classes suffer most with them. I conclude that vegetable food, often ill-prepared, and eaten to excess, may be the chief immediate cause : but as if certain states of the constitution predisposed, I have noticed that in those families which are most troubled with them, there has been sometimes a scrofulous taint, and in one particularly, a great defect in the bony fabric ; many of the children have large heads and crooked legs. In one house, a boy about six years old was seized with convulsions and died, in spite of warm bath, blistering, and injections, before any thing could be got down his throat. The small intestines contained about a dozen lumbrici, as was discovered after death. An elder sister of this boy had died of chorea after a long continued suffering.

The existence of ascarides affords no presumption that there are not lumbrici. Observation has led me to suspect the latter the more, when I have found the former to exist. I believe that the lumbrici reside chiefly in the stomach and small intestines ; and the dissection of one subject has shewn me that they dispose themselves in the most curious and tortuous form, such as I thought exactly adapted to the exertion of their muscular power against opposite sides of their cylindrical¹

abode, resisting by this means the effect of the propelling motion of the canal, and thus keeping their station. An illustration of this mode may be found in the art employed by a chimney-sweeper to counteract the effects of gravitation by pressing against opposite sides of the cylinder in which he exerts his skill.

Experience has led me to believe, that but little dependence is to be placed upon medicines, simply purgative, for the removal of either species of intestinal worm. The strong action excited by calomel, jalap, senna, &c. may by chance hurry a solitary reptile to a postern grave; but they deserve no comparison with the specific antidote recommended by Dr. Fenwick, and of which so many subsequent communications attest the excellency. In following the directions of Dr. F. I have in several instances seen its powerfully good effects: but I shall trouble the reader only with its anthelmintic power when employed in a different way. A child about three years old, looking pale, with a very large abdomen, had occasionally voided a lumbricus. Purgatives were had recourse to with very little effect. I had not heard that the oleum terebinthinæ had ever been employed for the removal of this species of worm, and I did not think it justifiable to assail them with a full dose in so young a subject. I prescribed, therefore, half a drachm of the ol. tereb. and mixed with four drachms of thin mucilage of gum-arabic, to be

given twice or three times in the day. It was continued a week with some interruptions, within which space one hundred and twenty mostly full-grown lumbrici were brought away. I have seen several less remarkable instances of its good effect when thus diluted. I once prescribed a full dose in a case where I had great reason to suspect the existence of a *tænia*, portions having come away, without success. It was administered upon a fasting stomach, a state, in which I believe that this organ has its greatest power of digestion, and therefore possibly of converting the remedy to something less noxious.

In case of failure in the common mode of exhibiting it, might it not be reasonable to administer it shortly after a hearty meal, when the organ of digestion was fatigued? Would not the poison reach its destination, though mixed with food, less changed, and incommode the worms by its pungent properties applied to their surface?

I have sometimes seen the remedy produce alarming intoxication; but I once gave an ounce and a half to a man without any such effect, which operated in four hours, and brought away nearly thirty yards of tape-worm to the great improvement of his health in general, especially his liability to epileptic attacks. Administered to a young gentleman about four years old in the dose of one drachm, I saw it produce a great disposi-

tion to sleep, with paleness and coldness, which went off in a few hours.

To the well known fact of the destructive powers of fever to worms, I would add, that a few years ago, when the measles were epidemic in this town (Beaconsfield), a large majority of the children taken ill with them parted with worms, although they had not been previously known to be affected by them in any remarkable manner. I have often quoted this fact to my patients, in order to reason them out of a belief, that when in fever worms have been voided, they formed an essential part of their disease. It could be supposed by none of them that worms had occasioned the measles.

I think it right to add to the foregoing remarks, that I am not without suspicion that uterine hæmorrhage may also arise from the same cause. It existed in two of the cases described, and while engaged in writing this paper, I was called to a young woman who had been alarmed by having voided a worm (*lumbricus*). She suffers from menorrhagia every fortnight, which continues upon her with a violence that injures her general health. She has been subject to it many months, and has been married a year and a half without conception. A small dose of the *ol. tereb.* has in her instance removed several *lumbrici*; but the recent occurrence of the case prevents my adding any farther particulars.