CASE
OF
A WOMAN,
WHO VOIDED A LARGE NUMBER OF WORMS BY
THE URETHRA ;
WITH
A DESCRIPTION OF THE ANIMALS.

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THE origin of those animals which inhabit the internal parts of living bodies, is involved in much obscurity. Although the intestinal worms appear manifestly, from their peculiar form, consistence, and organs, to be particularly designed for those situations in which they are found ; although they have generative organs, and no similar animals are known to exist out of living bodies, yet it has been generally conceived that the germs from which they spring enter by the mouth *. The production

* The following facts, stated by Goeze, entirely overturn this opinion. Professor Brendel, of Göttingen, found ascarides in the

of hydatids in various parts of the body, cannot, however, be accounted for on such a supposition; neither can we very easily conceive that ova should enter from without, into the urinary organs. In this point of view, the case which I am about to detail is interesting, as it exhibits an unquestionable instance of peculiar and undescribed worms voided from the urinary passages.

The instances in which worms are said to have been voided from the urinary bladder are very numerous *, but I know no other case than the present, in which a distinct species of worm has been clearly proved to come from that organ. In the recorded instances, most were the common intestinal round worms, which may easily have gained admission into the bladder. These worms sometimes perforate the intestines, and are discharged by abscesses; sometimes the bowels become adherent to the bladder, so that their contents, of various kinds are voided with the urine;

rectum of an immature embryo. Blumenbach discovered *tæniæ* in the intestinal canal of young dogs a few hours after birth. Bloch saw flukes in a sucking lamb; and Goeze himself met with a *tænia* of several ells, and many smaller ones, in a lamb of four weeks old. Versuch einer naturgeschichte der Eingeweidewürmer, pp. 55, 56.

* A great number of references is given in Voigtel's Handbuch der pathologischen anatomie, b. iii. p. 337—342. Goeze had never seen any worms in this part of the body, but he refers to Redi for accounts of worms in the kidney of animals.

and in some instances, coagula of blood, mucus, or portions of the mucous coat of the organ, have been mistaken for worms. Some of the descriptions can apply only to larvæ of insects ; and I have seen two specimens of these sent from the country, as worms voided from the bladder.

The particulars of the following case were communicated to me by Mr. Barnett, surgeon of St. John Street, who has persevered with great humanity through a long and tedious attendance, and spared no pains in adopting any means which promised the least chance of relief. He has afforded me frequent opportunities of seeing the woman, of examining the worms, and of ascertaining the fact, that they come from the urethra.

Mary Pearson, aged 24, a single woman, of a healthy and strong constitution, was seized in the winter of 1806, with retention of urine, requiring the daily use of the catheter. Her circumstances rendered it necessary that she should go into an hospital. She complained of great weight in the bladder, pain about the loins, and numbness of the thighs; she seldom passed any water, and, when she did, only a few drops, much tinged with blood. It was deemed a case of calculus, but nothing of that nature could be detected by the sound. After remaining a long time in this place without any relief, she left it, and placed herself under the care

of a medical man, who used the catheter twice daily ; she then went into another hospital, where the same opinion was entertained of the nature of her disease. In the summer of 1809 she became a patient of Mr. Barnett, and informed him of the preceding particulars. At this time her constitution was greatly disturbed, and she was much emaciated. Her tongue was furred, and frequently assumed a typhoid appearance : her appetite was entirely lost ; she complained of pains in the loins and bladder, and had passed no water for the last six months, except by the assistance of the catheter. About this time she was seized with violent fits whenever the use of the instrument was delayed longer than usual, or when the pain and burning heat in the bladder were particularly great. Leeches and fomentations to the region of the bladder were employed ; the state of the bowels regulated by oleum ricini and uva ursi taken daily ; some sandy matter and urine were brought away by these means.

As the symptoms denoting the existence of some mechanical irritation in the bladder were still unrelieved, Mr. Barnett sounded without finding any indication of stone ; the examination gave great pain, and produced in the patient a sensation as if the instrument had struck against a ball at the top of the bladder. From this time the sense of weight became more considerable, and she felt a

fluttering within her, as if something was moving; this was so distressing as to oblige her to continue constantly in bed, to which she has since been almost entirely confined; the quantity of urine had become considerably diminished; it had been necessary at first to use the catheter twice a day; afterwards once a day, once in two days, and lastly once in three days was sufficient. She went on till the beginning of August, using such means as are generally employed in affections of the bladder, without the slightest alteration. In fact, her constitution was daily suffering more and more. She was unable to get up, and continually tormented with a distressing pain in the head, which she had never felt before. The least noise alarmed her. The appetite was entirely gone, and she took nothing but liquids in very small portions: she could get no sleep without large doses of opium. The fluttering in the bladder was more violent, and according to her own account, so strong as to be perceptible to the hand; and the bladder itself much distended, even after the water had been drawn off, and so tender that the weight of the bed clothes could not be borne. A very careful examination was again made with the sound, and produced the same feeling as before, of its striking against a ball in the bladder. This was followed by an exceedingly violent convulsive fit, in which the patient was so agitated, that five or six persons were required to hold her.

She seemed in the greatest agony, and much like a person in tetanus. She remained more than half an hour totally insensible to every thing around her: on her recovery, she said that the lump was evidently removed by the instrument from the top of the bladder, and pressed very heavily against the neck; and that the fluttering was very violent. Fits of this kind have since taken place repeatedly. In order to prevent any mischief from over distension of the bladder in the night, particularly as not more than two ounces of urine were voided during the examination, the catheter was left in the urethra. She passed a very restless night; the motion in the bladder was very distressing, and, although the urine had escaped as fast as it was secreted, the bladder seemed greatly enlarged. Mr. Barnett was much surprised, on removing the catheter, to find insinuated through its orifices, what appeared to him a roundish worm, about the size of a piece of bobbin, an inch and a half in length, and of a white colour. At this time Mr. Barnett gave me an opportunity of seeing the case; we examined very carefully with the sound with the same result as before, and agreed that the catheter should be again left in the urethra, in order to throw further light on the cause of the patient's sufferings. Three worms were now brought away, two of them most curiously entangled in the orifices of the instrument, and the third coiled round the end.

As we had now gained some information concerning the cause of the symptoms, Mr. Barnett attempted for its removal, at my suggestion, to dilate the urethra on the plan recommended by Mr. Thomas in the first volume of the *Medico-Chirurgical Transactions*. The sufferings of the patient were so considerable, that this could not be followed up to the desired extent. The effects of the oil of turpentine in cases of *tænia*, determined us to try that remedy. Two drachms were given at bed-time in a little warm beer, producing no other sensation than that of a pleasant warmth at the stomach. The influence of the medicine on the urinary secretion was very manifest by its subsequent effects; the bladder was painfully distended on the following morning, although the water had been drawn off the evening before, and at this time the catheter was used only once in three days. A pint and a half of urine was evacuated. A double quantity of the medicine was repeated in the evening, producing no other effect than a profuse perspiration during the whole of the night, and a strong inclination to make water in the morning; she made no effort to assist this disposition, as the length of time for which the catheter had been employed, made her suppose it would be useless. The feeling became at last so urgent that she yielded to it, and passed a pint and a half of water containing four worms; the only natural evacuation of urine she has had during Mr. Barnett's attendance. The continuance of this

treatment did not produce success corresponding to such flattering appearances. The medicine, on the fourth time of using it, produced most violent pain in the head, and much fever, which was followed by erysipelas over the whole body, but more particularly in the face. All subsequent attempts to use it, even in diminished doses, were attended with a recurrence of these symptoms. From the first trial of the oleum terebinthinæ, however, to this time, the patient's health was on the whole very considerably amended; she recovered her appetite, rested at night without opium, and was so much relieved from the feelings about the bladder, that she could remain up four or five hours in the day. Mr. Barnett now injected into the bladder equal parts of the oleum terebinthinæ and water, which produced only, according to the patient's expression, an increased fluttering in the worms. On withdrawing the catheter, four worms came away. The repetition of this injection produced the same constitutional irritation and erysipelatous inflammation, as the internal use of the medicine had before done. The fits, which had before so much distressed her, were again renewed.

As these means had failed, Mr. Barnett introduced on the 22d of February, a very large catheter, open at the end and furnished with a stilette, that filled the orifice when it was introduced; on withdrawing the stilette, a free passage was left for the

contents of the bladder. In less than half an hour nine worms came through, with a table-spoonful of sandy matter. Four of these were five inches and a half in length. Five more worms came away on the 24th, and one on the 25th. On the next night the patient was very restless, and the motion in the bladder so painful as to cause fits. On the 28th three worms passed; March 2d, nine large ones; 6th, four; 9th, five; 17th, four; 23d, five; 26th, two; April 5th, seven; 6th, seven. On the 13th of April equal parts of ol. terebinth. and water were injected; twelve worms came away; on the 17th, three parts of turpentine with one of water were injected, and thirteen came away; on the 20th, turpentine alone was thrown in, and ten were discharged. Slight motion of an undulating nature was observed in some of these, but they were mostly dead; sometimes the worms that had passed through the catheter were observed as low down in the bed as the patient's feet. She continued discharging worms in much the same way; and Mr. Barnett supposes that there have been as many as 600 voided. In one instance a portion of mucus came away, involving several small worms, from half an inch to an inch in length, which lived in the urine for three days, and moved very briskly.

April, 1811, she remains in the same condition; the catheter is employed once in two or three days, and the urine is scanty in quantity, but little altered in quality; worms always came with

it in different numbers; twenty-two is the greatest number discharged at once, excepting when the small ones came away. Mr. Barnett has lately used olive oil as an injection. The irritation seems less, and the fits after its employment are less violent. Worms come away whether injections are employed or omitted, but in greater number when they are used.

October, 1811.—A large abscess formed near the vagina in June, attended with severe constitutional symptoms, and every appearance of the patient's sinking; when it burst into that cavity, she was greatly relieved. A large quantity of unhealthy matter was discharged, and eight or ten ounces have been voided daily ever since; a worm came with it in one instance. She is on the whole tolerably well at present, and has a good appetite; but her inability to move, the discharge of worms with the urine, and the occasional fits continue the same. The whole number discharged up to this time cannot be less than from 800 to 1000.

In the accompanying drawing are represented a large and a small worm of the natural size. The latter were only voided on one occasion.

The large worms are mostly from four to six inches in length, and the largest was eight inches; they are slender in the middle, where they appear uniformly almost as if broken; they increase

gradually in both directions from this middle point, and then decrease again to the two extremities. When placed in water, after immersion in spirit, they are bent at this middle point, and lie in the form represented in the drawing. The surface exhibited in the picture has the appearance of a double row of small protuberances, and these degenerate towards the pointed extremities into a thin floating edge. On the opposite aspect the body is grooved, and has two rising edges. When it is cut through by a transverse section, the figure is nearly square. They are soft when first voided, and of a yellowish hue. I could not discover any arrangements of parts by dissection; the body seems homogeneous throughout, and careful microscopical observation did not shew any thing concerning their organization.

The numerous figures and descriptions of Goeze do not make us acquainted with any such worms.

The smaller worms were semitransparent when first voided; they became perfectly opaque by immersion in spirits. Their form is rounded, and the two ends are pointed. Microscopical examination of these proved no more instructive than that of the former.

Engraved by J. Stewart