

conviction that a method laying claim to general applicability must fulfil the following conditions:—

1. It must admit of detecting the arsenic in every form in which this mineral can possibly exist.

2. It must not merely lead to the detection of arsenic, but also to that of the other metallic poisons.

3. It ought to preclude the possibility of confounding arsenic with other substances.

4. It must admit of detecting even very minute quantities of arsenic.

5. The method sought must enable us to obtain, at least, an approximate quantitative determination of the arsenic detected.

6. It must fulfil all these conditions by the most simple means.

In order to obtain a clearer conception of the whole matter, we divided the general question into several parts, as follows:—

A. In what manner may we obtain from mixtures containing arsenic clear fluids, in which all the arsenic is contained, and which are adapted for further investigation, without adding to the substances under examination metals which themselves may have been administered as poison.

B. By what means can we most completely separate arsenic?

C. In what manner may we obtain from the isolated arsenic compound the metallic arsenic without any loss, and at the same time, so as to preclude the possibility of a mistake?

D. In what manner may we best and most safely ascertain whether what we think to be metallic arsenic is really such?

E. How far is a quantitative determination of the arsenic detected possible; and which is the best method for the attainment of this purpose?

Previous to entering upon the manner in which we have solved these questions it seems expedient to premise a short review of the methods hitherto proposed.

Essays on the detection of arsenic have, during the last few years, so enormously accumulated, that it really requires no small labour to work one's way through them; the reason for this lies partly in the fact, that almost every one who has occupied himself with this matter, either professionally or from inclination, has thought himself called upon to propose some new and particular method of his own, and partly, indeed, principally, in the circumstance that the essayists have not always any complete or very distinct notion of the nature of their task; and have, therefore, altered and improved methods *ad infinitum*, which, in their very principle, could never answer the design which they were intended to subserve.

Thus, despite the innumerable essays that have appeared upon this subject, we possess only a few methods which can be considered really to differ from each other. Now, although considering this enormous accumulation of materials, it must appear exceedingly difficult to give a review of these methods, yet the performance of the task will be greatly facilitated if we occupy ourselves merely with the consideration of those methods which differ in their principle from each other, and disregard the innumerable modifications of one and the same method if this method appear inadmissible in its principle.

Taking this view of the matter, there remains only four methods proposed for the detection of arsenic in admixtures containing organic matter, which can be regarded as differing from each other (the simple way of detecting arsenious acid in powder, is here altogether disregarded, since it is well known that it does not present the slightest difficulty).

(To be continued.)

THE acute diseases of old persons in the summer months almost always consist in affections, the basis of which is some disturbance of the gastro-intestinal apparatus. Such attacks may often be dissipated, almost magically, by the exhibition of an emetic and purgative. All the other most common diseases of old age, such as catarrh, pneumonia, various cerebral maladies, &c., are almost exclusively observed in the cold season of the year.

CASE OF OVARIAN TUMOUR INTERRUPTING PARTURITION,

AND ATTENDED BY UNUSUAL CIRCUMSTANCES.

By EDWARD HEADLAND, Esq.*

I WAS requested, about three years ago, to visit a young woman, in the twenty-fourth year of her age, who had been suffering for a considerable time from amenorrhœa; the abdomen had latterly become much enlarged, and it was easy to discover a swelling in the left iliac region, which was of considerable size, and clearly an enlargement of the left ovarium; it interfered very much with the action of the bowels, and she was altogether much out of health,—pale, feeble, and emaciated; she was, however, so much improved by the use of aperients, with mild doses of different preparations of steel, continued for several weeks (but without a reduction in the size of the tumour), that from this time I saw nothing of her until about two months ago, when, having since married, she came to request that I would attend her in her confinement, which she expected in the course of a few weeks. It was her first pregnancy. Having consented to take charge of her, I was sent for at about four o'clock, p.m., on Friday, the 11th of May; she stated that she had had occasional pains during the day. I remained with her for about twenty minutes, but finding that she had then no pain and was sitting up, and nothing, therefore, that would justify an examination, I left her, requesting that I might be sent for when her pains returned. I saw her again at eleven that night, when her pains had slightly increased; upon examination I then discovered that nearly the whole of the vagina was diminished in circumference by the presence of a tumour occupying the lower and posterior part of the pelvic cavity, lying in the hollow of the sacrum, with its greatest prominence immediately opposite the symphysis pubis, and between the rectum and posterior parietes of the vagina. It was slightly elastic, and gave me the impression that it was either fungoid, or a cyst containing some kind of fluid, but its exact nature I could not determine. In addition to this projection, and within three inches of the external opening of the vagina, was a second, of a firmer nature, very unyielding, and having the feel of bone or cartilage, either attached to the swelling itself or to the sacrum, and creating an additional impediment to delivery. I had considerable difficulty in reaching the mouth of the uterus, owing chiefly to its great distance from the external opening, but partly by the very slight space that existed between the most prominent part of the swelling and the symphysis pubis, the distance here being, I believe, at this time, barely an inch and a half, even aided by the elasticity of the tumour. I discovered, however, that the mouth of the uterus was beginning to dilate, and that the head of the child was to be felt through the membranes; the dilatation at this time was, perhaps, of the circumference of a half-crown piece; the mouth of the uterus was pointing in a direct line towards the vulva, and not directed backwards towards the sacrum, from which it was clear that the uterus had been driven higher into the cavity of the abdomen by the presence of the swellings. The pains continuing but feeble, I was allowed some time for reflection; it, of course, however, did not require much time to conclude that either the child must be reduced by craniotomy, or that the swelling must yield considerably in bulk, or be altogether returned, lessened in size, or removed, before it could pass from the vagina; there being still considerable space between the upper part of the tumour and the uterus, I felt that it was yet not the moment for interference, particularly as she could scarcely be considered to have pain. Upon a second examination, made a short time afterwards, I was surprised at finding the fingers covered with what appeared to be feculent discharge, but which could not be meconium from its colour, which was of a pale yellow; it continued to flow

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gradually till the end of the labour, which lasted twenty-four hours from this time, and during its flow the tumour gradually lessened. Upon making this discovery it was clear that something had given way, and the immediate impression was that an ulcerative process had been going on, by which an opening had been formed, establishing a connection between some part of the intestinal tube and the vagina, and that the last portion of the septum had been destroyed by the first pains of labour. In this stage of the matter I felt anxious for the co-operation of some fellow-practitioner, and my friend and neighbour, Mr. Stedman, favoured me with his assistance. He was of my opinion, viz., that the discharge was feculent, and that it must have arisen from the cause just referred to; we both thought it better to allow the labour to proceed without interference, and the head slowly descended, and with it such a reduction in the size of the swelling as to lead us to think that the head would eventually pass without being opened, or, at all events, with the aid of the forceps. After the lapse of several hours, the head having descended, as was supposed, to within the reach of the short forceps, it was thought desirable to accomplish the delivery. Their application was effected without difficulty, and she was delivered in about twenty-eight hours from the commencement of labour.

Having ascertained, by placing the hand upon the abdomen, that the uterus was tolerably contracted, I passed my finger along the cord with a hope that I should at once succeed in removing the placenta, but not being able to feel the insertion of the cord, and not finding it detached, it was thought better to wait for a short time. In making this examination, however, which was done with great care, an opening could be felt in the upper and posterior part of the vagina, close to the mouth of the uterus, and communicating with the cavity of the bowels, and through which two fingers might have been easily passed. A considerable time having elapsed without the slightest effort on the part of the uterus to expel the placenta, I introduced my hand, and, with great difficulty, removed the placenta, an operation which lasted a considerable time, owing to the remarkable and diseased manner in which it was attached, its entire surface being attached to the uterus. After this had been accomplished she appeared tolerably comfortable, and an opiate was administered, which seemed to act usefully. Vomiting soon, however, set in; she became restless, had great perspirations, with a feeble rapid pulse and hurried breathing, and sank in about twenty-four hours after her delivery.

I was allowed to make an examination, which was done sixteen hours after death. Upon opening the abdomen the diseased left ovary immediately presented itself, arising out of the left iliac fossa, and extending high into the abdominal cavity, above the uterus which was lying well contracted, and in its natural situation. This ovary was probably of the size of an ordinary cocoa-nut, highly vascular, distended with a semi-transparent fluid, and scirrhus, as to one-third of the entire structure; she had also true melanosis in the broad ligament of this side. An incision having been made from the fundus uteri through its entire length, laying open the vagina also, an irregular and somewhat circular opening was exposed through the upper and posterior part of the vagina, and about an inch and a half from the mouth of the uterus, which was clearly the opening already alluded to, but no direct communication with the intestine could be discovered; the opening itself was much discoloured, as well as much of the structure in the immediate vicinity; the texture very thin, and so much changed in character that it was broken down most easily by the finger; the parts here were of a deep brown colour, and gave an observer the immediate impression that there had either been a pressure of many weeks duration upon this part, or that the circulation in the minute vessels had been arrested by their elongation, which might have arisen from the situation of the right ovary, which was found upon raising the fundus of the uterus and turning it forwards; this ovary was much larger than the other, and had been lying behind the uterus constituting the tumour which had been discovered during labour, its fundus being the most depending

portion, wedged so low between the vagina and rectum as to be felt within two inches of the anus. It had given way at its smaller extremity, where there existed a large opening corresponding with the opening in the vagina, and from which exuded the feculent-looking discharge already described; it was also obvious that by the falling over of this tumour and its weight below, and by the uprising of the gravid uterus, that the vessels in some portion of the lateral ligament, and the texture already mentioned, had been greatly stretched, whereby the foundation was laid for the rupture which subsequently occurred; in this ovary, also, was discovered extensive scirrhus, and which proved to be that which I had considered cartilage, when felt through the parietes of the vagina upon the first examination. The placenta seemed to have been effectually removed with the exception of here and there flocculi, which were still so strongly adherent that they could not be detached, even by the forcible use of the handle of the scalpel. The intestines were sound, and we could not discover further disease of any description.

I have related this case simply with a view of recording the facts in connection with it, showing, as they do, that notwithstanding you may have one ovary greatly diseased and in its usual situation, that the other may also be equally and still more diseased and found in the situation just mentioned; for although cases are recorded where the diseased ovary has been found so placed during labour, and has been pushed back, and others where an opening has been made, and the contents evacuated, I am still unacquainted with any case where both ovaries were diseased to an extent of this kind. In a case related by Dr. Merriman in the "Med. Chir. Transactions," and transcribed by Dr. Ramsbotham in his recent work, in which the doctor succeeded in returning the ovary, there is no mention of the second ovary, and although the works of Denman, Blundell, Good, Rigby, and others, allude to the possible existence of diseased ovaries in this situation, and speak of puncturing as the best method for relief, they yet seem rather to quote from each other, and say more of what might be than of what has been seen, and it does not seem that in many cases puncturing has terminated by the recovery of the patient. In this case the very large extent of what ultimately proved to be scirrhus formation, together with its firm elasticity, and the known existence of the other ovary so extensively diseased, did not, I confess, lead me to think that the right ovary was the cause of the obstruction, and the more especially as the fact of impregnation would seem highly improbable if the right ovary, the only available portion that could produce the material of foetation at the time this conception must have occurred, was in any way showing the formidable disease we ultimately discovered.

It does, however, I conclude, become highly probable that an enlarged ovary never occupies the space between the rectum and vagina if the enlargement exists prior to impregnation; but should the enlargement occur subsequently to a certain development of the uterus, the enlarged and firm uterus resists the uprising of the diseased ovary, and it is therefore driven below.

CONTRIBUTIONS TO THE PRACTICE OF MIDWIFERY.

By Dr. J. HALL DAVIS, Physician to the Royal Maternity Charity.

LABOUR WITH PROLAPSE OF THE CORD BEFORE THE HEAD. LIFE OF THE CHILD PRESERVED BY TURNING. RELATIVE DIFFERENCE IN RAPIDITY BETWEEN THE FETAL AND MATERNAL CIRCULATION.

JUNE 25, 1839. At mid-day I was requested by Mr. Gravely to visit Mary Shaw, aged thirty-two, residing at Compton-place, Compton-street, Brunswick-square, in labour of her seventh child. Labour-pains had commenced on the previous day, at two, p.m., and the membranes had broken at seven, p.m. Mr. Gravely was sent for at eleven, p.m. He then found tolerably active pains, a prolapse of the funis, and a fully-dilated state of the orifice of the uterus, but the presentation was doubtful.