II.—COLOURLESS.

(A.)—*Crystalline*, which may be(1.)—*Oxalate of lime*.—Octahedral or quadrilateral crystals; insoluble in acetic acid, soluble in nitric and hydrochloric acids; boiling with carbonate of potash; forms soluble oxalate of potash and insoluble carbonate of lime; the former gives characteristic reactions with chloride of calcium, sulphate of copper, and nitrate of silver.

Before blowpipe becomes carbonate of lime; on continuing the heat, lime only is left, giving out heat on the addition of water, and browning turmeric paper.

(2.)—*Phosphate of ammonia and magnesia*, (triple phosphate), right rectangular or trilateral crystals; soluble in diluted mineral and acetic acids, from which, by an addition of ammonia precipitated in a crystalline form; soluble in boiling solution of potassa, with evolution of ammonia.

Before the blowpipe gives off ammonia, and runs into a white enamel; addition of phosphate of lime imparts ready fusibility.

(3.)—*Cystine* in simple or compound tables; insoluble in boiling water, soluble in ammonia (with odour of sweet brier) and alkalies, and precipitated by acetic acid; insoluble in alcohol, tartaric and oxalic acids, and bicarbonate of ammonia.B.—*Amorphous* may be(1.)—*Phosphate of lime*.—Readily soluble in dilute hydrochloric and nitric acids, sparingly in acetic; precipitated by ammonia in an amorphous condition, forming, when collected on a filter, a horny mass; oxalate of ammonia in these solutions gives a white precipitate.

Before the blowpipe, first black and then white, leaving an ash, which is neutral.

(2.)—*Urate of ammonia*.—Characters as above. (Coloured, B.)

Pus.—The microscope detects pus globules. The urine coagulates more or less by heat; soluble in solution of potassa, forming a tenacious glairy fluid.

Mucus.—Insoluble in potassa; imparts little or no albumen to the urine, therefore slight or no coagulability by heat, &c.

Pettinkofer's test.—Add to the urine, by drops, two-thirds of its volume of sulphuric acid, keeping the mixture below 144°; add a few drops of a solution of cane sugar, (one to five of water,) and shake the mixture, when, if bilin be present, a violet-red colour will be developed.

York, June, 1846.

FATAL INSTANCE OF SUPPRESSION OF URINE.

By HENRY L. TOVEY, Esq., M.R.C.S.E. London.

MR. D—, the subject of the following case was a remarkably healthy, tall, fine man, in the forty-ninth year of his age, had always enjoyed excellent health, and never in his life had any difficulty in passing his urine, nor any affection whatever of the kidneys, bladder, or urinary passages. In the autumn of last year, I attended him for a slight attack of dyspepsia, which soon yielded to the ordinary means. He says he has not felt quite so strong since that attack as before, and of late he has suffered very much from intense mental anxiety.

I was requested to visit him on Wednesday, the 26th of February last. He was then complaining of uncomfortable feelings, lassitude, and loss of appetite; the tongue was moist, and slightly coated; pulse natural; no pain; the abdomen soft, and perfectly free from pain on pressure. He told me he had passed but a few drops of urine that morning, and as little yesterday. He had no inclination whatever to micturate, nor could I discover any fulness or tension about the region of the bladder. I ordered fomentations to the lower region of the abdomen and perinæum; also compound extract of colocynth, ten grains, with calomel, four grains; mix for three pills, to be taken immediately. To take sulphate of magnesia, three drachms; carbonate of magnesia, two scruples; tincture of henbane, forty drops; water, four ounces; mix. A fourth part to be taken every four hours.

Feb. 27th.—Free from pain. The medicine acted once only, and not very copiously; stools watery and bilious. Had slept well, and passed no urine, nor had he the slightest inclination to void any. The abdomen and region of the bladder remained as free from pain, fulness, or tension, as yesterday. I was now desirous to pass the catheter, to be assured that no urine was in the bladder, but Mr. D— having a great horror of instruments and operations, I could not prevail upon him to allow me to do so. I ordered ten leeches to the perinæum, a warm bath, followed by warm poultice to the perinæum; also, chloride of mercury, eight grains; compound extract of colocynth, half a drachm. Mix for eight pills, two to be taken every four hours, with each dose of the following mixture:—Infusion of senna, six ounces; sulphate of magnesia, six drachms; carbonate of magnesia, two scruples; tincture of

henbane, forty drops; mix. A fourth part to be taken every four hours.

28th.—Bowels acted freely three times; passed a good night, free from pain; head quite comfortable; skin moist; tongue a little coated; pulse natural; passed no urine, nor had the slightest inclination. Upon a careful examination of the loins, there was a slight uneasiness upon pressure on the right side. Ordered twelve leeches to the right loin, and to continue warm baths and fomentations to the perinæum and loins. Also, chloride of mercury, two grains; compound extract of colocynth, six grains. Mix for two pills, to be taken at night. Spirit of nitric ether, three drachms; tincture of squill, two drachms; tincture of henbane, forty drops; water, five ounces and a half; mix. A fourth part to be taken every four hours.

March 1st.—The same in every respect; quite free from pain; no fulness or tension about the abdomen; no desire whatever to pass urine, nor had he passed any during the night; bowels acted freely. Repeat the medicines, warm bath, fomentations, &c.

2nd and 3rd.—In every respect the same, except that he had been occasionally sick, and vomited a green fluid; he has passed no urine, nor has he the slightest inclination to void any; no pain, fulness, or tension, of the abdomen; pulse natural, and skin moist. Conceiving it to be quite impossible that this state of things could continue, and that unless a favourable change took place soon, a fatal termination must assuredly be the result, I proposed that Mr. Callaway should meet me in consultation. To this he consented with reluctance, feeling, as he said, so little amiss with himself. He had passed no urine now for the last six days.

4th.—Mr. Callaway saw him, with me, at half-past two o'clock. No pain, fulness, or tension, of the abdomen; no desire whatever to micturate; tongue a little coated; pulse natural, and skin moist. The catheter was now introduced, and not one drop of urine passed through it from the bladder; the passage of the instrument through the prostatic portion of the urethra seemed to produce considerable pain; indeed, the whole length of the canal was in a very irritable and vascular condition, as evinced by the hæmorrhage which followed, and the degree of pain produced. Ordered, eight leeches to the perinæum; warm bath; fomentations; poultice. To take, chloride of mercury, three grains; opium, half a grain: mix for a pill, to be taken immediately. An effervescing saline draught every four hours; a purgative draught next morning.

5th.—A note, despatched to me early this morning, informs me that Mr. D— had passed a most painful and sleepless night, with distressing thirst, sickness, and pain about the perinæum. At twelve o'clock, I found him in every respect much worse, though the pain had nearly left him; pulse 104; great thirst; countenance much altered, and anxious; mouth clammy, and tongue getting dry; abdomen fuller, but not tender; the bowels had acted freely, and a tape-worm of considerable length had escaped in one of the motions; he still passed no urine. Repeat the medicines, warm bath, and fomentations.

6th.—Mr. Callaway saw him again to-day, with me, at two o'clock. Evidently worse; thirst distressing; mouth so clammy and dry as to render articulation indistinct and imperfect; quite sensible, but somewhat confused in answering questions; pulse 100; abdomen fuller; but he so feared an operation, that he would not allow his abdomen to be very accurately examined even by the hand. It would have been desirable again to introduce the catheter, as, from the increased fulness in the abdomen, urine might possibly be now present; but all our entreaties to that effect were useless—he would not consent. The case was now hopeless; indeed, it was evident he was rapidly sinking. The same means were persevered in, but he expired the next morning, at about nine o'clock. There was little or no coma, and he retained his senses to within half-an-hour of his death. It is much to be regretted that a post-mortem examination could not be obtained. I am inclined to think, from the suddenness of the attack, the previous good health, and apparently sound condition of the urinary organs, that this suppression might be attributed more to intense mental depression than to any material organic change in the kidney. It is certainly curious and interesting to find the ordinary functions of the system going on almost uninterruptedly for the space of six days, with so very important a secretion as the urine totally obstructed. Many cases of "ischuria renalis" are upon record, but I do not recollect a well-authenticated case where the obstruction continued so long, with so little apparent injury to the general economy. In the sixth volume of the *Medical Transactions*, is recorded a case, by the late Sir Henry

Halford, so interesting, and in many particulars so similar, that I have transcribed it for comparison:—

"A very corpulent, robust farmer, of about fifty-five years of age, was seized with a rigour which induced him to send for his apothecary; he had not made water for twenty-four hours, but there was no pain, no sense of weight in the loins, no distention in any part of the abdomen, and, therefore, no alarm was taken till the next morning, when it was thought proper to ascertain whether there was any water in the bladder or not, by the introduction of a catheter, and none was found. I was then called, and another inquiry was made, a few hours afterwards, by one of the most experienced surgeons in London, whether the bladder contained any urine or not, when it appeared clearly there was none. The patient sat up in bed and conversed as usual, complaining of some nausea, but nothing material in his own view, and I remember his friends expressed their surprise that so much importance should be attached to so little apparent illness. The patient's pulse was somewhat slower than usual, and sometimes he was heavy and oppressed. I ventured to state, that if we did not succeed in getting the kidneys to act, the patient would soon become comatose, and would probably die the following night, for this was the course of the malady in every other case which I had seen. It happened so; he died in thirty hours after this in a state of stupefaction."

Bermondsey-street, April, 1846.

ON PLACENTA PRÆVIA.

ITS HISTORY, PATHOLOGY, AND TREATMENT.

By SAMUEL EDWARDS, M.D., Bath.

OF all the incidents which occur to the parturient female, none is more appalling than the occurrence of hæmorrhage from implantation of the placenta over the os uteri. It comes on with unerring certainty; and although for a time it may be checked, it is only to return again at a longer or shorter period. Nature, in her efforts to accomplish a cure by delivery, invariably places the patient in the most imminent danger; and in no case in obstetric medicine do we find art so proudly raising herself in averting such fatal tendencies.

In the history of placenta prævia, we find sufficient evidence of its effects having been noticed from the earliest periods. Hippocrates particularly mentions the occasional descent of the after-birth before the child, and speaks of the danger to the latter when this occurs. The operation of turning, in these cases,—which was, we believe, first introduced by Ambrose Paré, and successfully practised by his pupil Guillemeau,—was a great step towards lessening the dangers attending this occurrence.

It has been argued by many writers on this subject, that Paré, Guillemeau, and Mauriceau, were quite unacquainted with the true nature of these cases, and that they invariably presumed that the placenta, if found at the os uteri on examination, was there by displacement from the fundus, and that the origin of the hæmorrhage was from the uterine vessels with which the after-birth had formerly been in connexion. After a careful review of the various passages in reference to this subject, particularly in the writings of Guillemeau and Mauriceau, we must agree with Dr. Lee when he states, that he (Guillemeau) has made no observations from which it can be inferred that he believed the placenta to have been originally adherent to the upper part of the uterus, and to have descended thence to the cervix. With regard to Mauriceau and La Motte, they followed Guillemeau strictly in his treatment of these cases; the former has left us a most accurate account of the symptoms and treatment, and recommends, in all cases of hæmorrhage from presentation of the placenta, to employ immediate delivery. He has likewise related several cases of hæmorrhage where the placenta was found presenting, and in which he had recourse to delivery by turning, as also many cases where the hæmorrhage was great, but the placenta did not present. We thus learn, at all events, that he was familiar with a practical difference, and, more especially, when we find that on several occasions he adopted a different practice. Instead of turning, as was his usual proceeding in placental presentations, he contented himself with merely rupturing the membranes, "and committing the labour to nature," thus anticipating a practice which, many years after, was brought forward by Puzos. It seems, too, scarcely possible to conceive that men who had repeatedly had recourse to turning in placenta prævia, should not have become aware, during the passage of the hand, of the close connexion of the placental mass with the neck of the uterus. Paul Portal, however, was the first who most

explicitly laid down the fact, that in these cases the placenta was originally implanted over the os uteri. It is clear, also, that Giffard, Smellie, Røderer, and Levret, were well acquainted with it, and particularly to Røderer are we indebted for a clear and distinct account of this hæmorrhage in his work, entitled "*Elementa artis Obstetriciæ*." Both by Giffard and Levret, independently of each other, it was shown, that hæmorrhage from placenta prævia must be a necessary consequence. Portal also, in one of his cases, speaks of it in very distinct language. He remarks,—“The after-burthen was placed before, and quite across, the whole inner orifice, which had actually been the occasion of the flux of blood; for by the opening of the orifice, the said after-burthen then being loosed from that part where it adhered to before, and the vessels containing the blood torn and opened, produced this flooding, which sometimes is so excessive as proves fatal to the woman, unless it be speedily prevented.”* It is much to be regretted that the works of these various authors had not been more extensively circulated and studied, and although it is probable, as Dr. Renton, in the *Edinburgh Medical and Surgical Journal*, has attempted to prove, that up to the year 1753, the obstetric physicians were ignorant of Portal's explanation, true it must be to every unprejudiced mind that the most eminent of them were acquainted by some means with the true explanation. Giffard mentions, in relation with one of his cases, (224.)—“When I had passed my whole hand into the uterus I found the placenta adhering all around the os internum, so that I was forced to separate it on one side to reach the membranes, which I tore.” Smellie also remarks,—“The edge or middle of the placenta sometimes adheres over the inside of the os internum, which frequently begins to open several weeks before the full time, and if this be the case, a flooding begins at the same time.” Until, however, the year 1775, when Dr. Rigby's essay appeared on uterine hæmorrhage, no complete and practical work had been published in this country upon this important subject; and if Dr. Rigby, in his truly valuable and classical essay, did not bring forward any new fact of the slightest importance relating to the causes and treatment of uterine hæmorrhage in the latter months of pregnancy;† yet he had the great merit undoubtedly of placing this subject in the best and most practical light, of drawing professional attention to it, when, as he states, the subject was not “recorded in the lectures which I had attended, or taken notice of in the common elementary treatises on midwifery,” as also of proving the frequent occurrence of placenta prævia; and thus showing the necessity, in every case of hæmorrhage, of bearing this fact in remembrance, and deducing the consistent practice from its “unavoidable” character.

The causes of this anomaly are wholly unknown, and all that can be advanced upon the subject must, and, perhaps, ever will, be mere theory. At any attempt at explanation we must go back to the first period of uterine life. The placenta is essentially formed by the chorion and decidua; it is not to be seen from the rest of the ovum until after the second month, when the villi of the chorion (the future placenta) have coalesced, and cover about one-half of the circumference of the ovum. Until the end of gestation, this mass goes on diminishing in extent, but increasing in thickness. We ever observe that Nature works by fixed laws, and in this particular she has wisely decreed, that the placental mass should usually be placed upon the posterior aspect of the uterus, this being that portion of the organ which we know increases least of all—thus allowing the placenta to grow with a less danger of hæmorrhage than it could elsewhere. Such, therefore, being the usual situation of the placenta, may it not be inferred that the ovum passes from the Fallopian tube into the uterus with that part of the chorion where the villi will collect, or in other words, to which the umbilical arteries and veins are to be distributed, (led in the tube formed by the closing of the amnion upon the urachus,) to form the placenta, placed posteriorly, as after its entrance into the womb it is fixed and almost surrounded by the decidua reflexa? If such, then, may be inferred, may not the cause of implantation of the placenta over the os uteri be owing to the ovum, just before its entrance into the womb, being turned partially upon itself, that portion of the chorion which should have been placed posteriorly, and a little to one or other side, being now directed downwards? We cannot help thinking this theory to be more tenable than that usually adopted, which presumes a deficiency of firmness in

* Portal's Midwifery.

† Vide Dr. Lee, *Edinburgh Medical and Surgical Journal*, 1839, vol. ii. p. 389.