the idea, that there are such modifications of uterine action in connexion with the periodic constitution. These facts, which bear a very interesting practical, as well as theoretical, relation to the question in hand, I shall give in detail hereafter.

2. *The Sympathetic Nerves generally.* The preceding observations upon the ganglia of the uterus proper, apply for the most part to the sympathetic ganglia generally. The modifications of pathological import, arising principally out of anatomical differences, can, of course, be supplied by the reader.

It remains now to investigate the morbid states which affect the spinal cord, the encephalic ganglia, the great brain, and the little brain. Having accomplished this, I shall pass on to a consideration of the modifications of uterine motor action which arise out of morbid states of the motor nerves and the structures of the uterus itself.

[*To be continued.*]

THE WATERY DISCHARGES OF PREGNANT WOMEN.

By R. U. WEST, M.D., Alford.

As a pendant to Mr. Harrinson's paper on this subject in the BRITISH MEDICAL JOURNAL, p. 543, I forward the following notes from my general registry of midwifery cases:—

"*No.* 222. *March 14th*, 1837. Breech presentation; premature; living child. The membranes gave way more than a month before delivery, and the liquor amnii escaped at different times in great gushes, each discharge being attended with pains. Portions of the membranes, in an almost putrid state, were discharged from time to time. During the continuance of this state, about five weeks, the woman was much troubled with palpitations, headache, flatulence, etc."

The case above quoted was merely an example of premature rupture of the amnion, and escape of liquor amnii—a circumstance which occurs very frequently: the labour, however, mostly following in a few days, seldom being delayed more than a fortnight. Without being exactly an example of the kind of cases which Mr. Harrinson discusses, it must nevertheless be regarded as a case of *watery discharge in a pregnant woman*. To say that she was five weeks *in labour*, would be preposterous. The following case is more in point:—

"No. 770. Sept. 20th, 1842. A natural labour. A discharge of watery fluid took place from the vagina or uterus on the 27th of August, and continued in large quantities up to the time of delivery, unattended with pain. It must have been formed between the chorion and the amnion, as the latter proved to be entire at the time of the labour."

Mr. Harrinson very correctly sums up his observations on the subject of these watery discharges by expressing the opinion that they *may* be attended with danger when the placenta is partially presenting. The following case will illustrate that opinion:—

"No. 2176. Feb. 5th, 1854. Hæmorrhage *ante partum*. Ergot. At 10.30 P.M., Feb. 4th, Mrs. R., of this town, was suddenly surprised by an immense gush of blood. She fainted, and was carried up stairs to bed. As I was detained at the time in attendance on another case at a considerable distance from home, I did not see her till 1.30 A.M.; meantime, she was under the care of one of my professional neighbours. On my arrival, I found the cranium presenting in the first position; the os uteri dilated to the size of a shilling, rigid, and rather thick. There were very slight pains at considerable intervals, each accompanied by a gush of slightly coloured serous fluid. I immediately ruptured the membranes, after which the flow of fluid ceased entirely. There was, however, some faintness felt occasionally; there was frequent yawning, and a very blanched countenance. I then gave a full dose of ergot. This speedily brought on nice pains, and the labour was safely completed at 4.15 A.M. The child was quite dead, probably in consequence of the hæmorrhage, as it had been felt to move just before the labour began. Immediately after the child was born, a very large firm coagulum, larger than the after-birth, was expelled. I think it probable that the gushes of pale fluid which took place with the first slight pains were composed chiefly of the serum of the blood, the coagulum of which was expelled after the birth of the child. The opening through the membranes was found to be close to the edge of the placenta. I could not feel any portion of the placenta during the labour. A considerable portion of the maternal surface of the after-birth, near the opening through the membranes, was found to be covered with a thin layer of very adherent and firmly coagulated blood.

"During the remainder of that day, Mrs. R. felt exceedingly well, the pulse and appetite being perfectly good. The next day the pulse was quick, but there was no other unfavourable symptom. On the third day, in the morning, I found her suffering from great pain in the abdomen, with tympanitis, and great tenderness on pressure. The pulse was 140, weak; tongue clean; no shiverings; lochia and milk all right. There were frequent eructations. I ordered fomentations. She had some difficulty in micturition. I gave her—

℞ Liq. morph. acet. (Ph. Lond.) ʒss; spiritûs ætheris nitrici ʒj; aquæ ad ℥iss. M. Fiat haustus statim sumendus.

"A calomel and compound scammony powder was ordered to be taken an hour after, the bowels not having been moved since the confinement; and she was directed to go on with the following mixture.

℞ Pulv. ipecac. comp. ʒss; magnesiæ sulphatis ʒvj; spiritûs ætheris nitric. ℥ss; aquæ menthæ piper. ad ℥vj. M. Fiat mistura cujus sumantur cochlearia ij 3tiis horis.

"In the evening she felt better; she had less pain and tenderness; could pass urine; the bowels had acted once slightly; pulse 120. There had been no headache to-day, though some was felt last night.

"Fourth day, A.M. Pulse 125, very feeble and indistinct; no pain; tenderness and swelling nearly gone. She was flatulent, and had been sick several times. The bowels had acted three or four times in the course of the night. (*Query*—Acute tympanitis?) She complained of thirst, and was *very smiling*.

℞ Confectionis aromaticæ ʒiss; tincturæ opii ʒiss; spiritûs ammoniæ aromatici ʒij; magnesiæ calcinatæ ℈j; aquæ menthæ piperitæ ad ℥vj. M. Sumat cochlearia ij 3tiis horis.

"Pulse at noon, 125, fuller; at night, 140, *fluttered*. The bowels were acting too much. The mixture was continued.

"Next day (fifth), the pulse was feeble and palpitating, 125-130. She had had a good night; was not sick; had no appetite; tongue clean; forehead hot. The bowels had acted again very freely after I paid my visit last night.

℞ Cretæ præparatæ ʒss; confectionis aromaticæ ʒiss; ammoniæ sesquicarbonatis ʒss; tincturæ opii ʒij; aquæ menthæ piperitæ ad ℥viij. M. Sumat cochlearia ij 4tiis horis.

"4 P.M. She was better; pulse steadier, 120. The bowels were quieter.

"Next day (sixth), A.M., pulse 100.; P.M., 90. Her appetite was returning; bowels quiet; and so she recovered rapidly."

Although not precisely a case of watery discharge *during pregnancy*, yet this is so far similar to Mr. Harrinson's cases that it affords an example of the escape of a considerable quantity of watery fluid, *in consequence of the partial detachment of the placenta*. There was danger, too, both at the time of the labour and after.

Happening to be in correspondence with Dr. Ramsbotham shortly afterwards, I took occasion to send him a copy of the note above quoted, because I thought that the puerperal disease which took place bore out his views on the subject of *acute tympanitis*. As, in his reply, he comments on the circumstances attending the labour, and on the discharge of watery fluid in particular, I here append his remarks:—

"The case you oblige me with is exceedingly interesting. The placenta was evidently placed close to the os uteri; so that hæmorrhage necessarily occurred when dilatation took place. That portion of the placenta covered with the layer of tough coagulum was the part separated: this, as no doubt you know, is very general, and has been taken by Dr. Simpson as a proof that the bleeding proceeds from the placental vessels, and as an indication of the correctness of his practice in withdrawing the placenta first in cases of unavoidable hæmorrhage; but I do not think his premises correct. I have no doubt that the pale serum was, as you suppose, the more fluid part of the blood, whose coagulum remained behind in the uterus. I have seen this very many times; and usually the distension occasioned by the collection of coagulum in this way has been attended by violent spasmodic pains."

In the three cases given above, we have examples of three different forms under which we may have an escape of fluid more or less aqueous during pregnancy. In the first, it was undoubtedly liquor amnii; in the second, it was probably a redundant fluid between the two membranes; in the last, it was the serum of the blood which was extravasated through premature detachment of the placenta. It is obvious that, with re-

spect to this last case, a similar escape of serum may take place *strictly during the pregnancy*, provided the portion of placenta detached be very small; but then the quantity of fluid evacuated would be limited in proportion. Usually, however, labour must be brought on, the case becoming one of "unavoidable hæmorrhage". I have met with other cases in which I have found this layer of tough coagulum adhering to the placenta: they are cases of what may be termed *internal hæmorrhage* before delivery.

"No. 601. March 8th, 1841. Premature. There was a very firm little coagulum adhering to one edge of the placenta, which itself appeared to be indurated at that point. *Query*—Did the premature separation of that diseased portion of placenta bring on the labour?"

No. 620. May 8th, 1841. Breech presentation; a six months fœtus, still born. There was a firm coagulum adhering all round the edge of the placenta, proving that there had been premature detachment of part of that organ—the probable cause of the death of the child, and of its premature expulsion."

"No. 899. Feb. 6th, 1844. There was considerable hæmorrhage when the os uteri began to dilate, though the placenta was not to be felt. It ceased on the rupture of the membranes. When the placenta was expelled, I found a large and firm coagulum adhering to one of its edges, which proved that the placenta had been attached very near the os uteri; that a corner of it had consequently become detached when labour commenced, and that the blood that escaped had passed between the membranes and the uterus. The pressure of the head after rupture of the membranes stopped this flow, and thus the coagulum formed."

In the first two of this last little series of cases, there was no premonitory hæmorrhage; and in none of the three was there any noticeable escape of serum, although undoubtedly the serum of the blood furnishing the coagula in them all must have escaped somehow. That its escape was not noticed, is not to be wondered at.

I think most of the cases in which water or serum escapes during pregnancy may be explained in one of the three ways suggested above.

Rebiews and Notices.

On Stricture of the Urethra. By Henry Smith, F.R.C.S., Surgeon to the Westminster General Dispensary, formerly House-Surgeon to King's College Hospital. pp. 280. London: Churchill. 1857.

Although we have heard a good deal lately about stricture of the urethra, at meetings of medical societies, in essays and treatises, in correspondence, in notes of newly invented instruments, and the like, we nevertheless open Mr. Henry Smith's book with much pleasure, and, it must be confessed, a strong prejudice in favour of the author, whose enthusiastic pursuit of surgery under difficulties has rendered him quite remarkable.

If we remember rightly, one of the first steps in the elements of surgery made by our author was his alleging to be fallacious the then current doctrine concerning the seat of stricture; and we think he deserves considerable credit for "dispersing" one of the traditional fictions in the art and mystery of surgery. Not fifteen years ago, one was pretty sure to hear a "Jones, M.R.C.S." (lately promoted), say to a "Brown" (going up), "Be sure, if *they* ask you at the College, 'What is the most common seat of stricture?' that you reply, 'The membranous portion.'" It has been argued, on the other side of the question, that the museum specimens on which Mr. Smith made his observations were selected on account of their exceptional peculiarities. This objection is not, however, worthy of much consideration. At page 28, he quotes his former observations; and shows that, in eighty-five specimens of urethral stricture, the seat of stricture in less than one-fourth part only of the whole was at the membranous portion.

We propose to take the opportunity of calling the attention of writers on stricture to a curious mental phenomenon which may be observed in all patients who have long suffered from stricture of the urethra, and who have been in the hands of several surgeons, and which has hitherto been quite unrecognised as a form of mental disorder. We would denominate this disorder *delirium coarticum*, or the stricture-delirium; the principal characteristics being a tendency to recount imaginary histories of dreadful suffering undergone by them, and of horrible tortures and injury inflicted on them by the surgeons whom they have previously consulted. A patient will say, for example, that, on one or more occasions during the attempt of a surgeon to pass a catheter (an attempt which, by the way, is invariably reported as a failure), he felt the instrument give a jump; and that simultaneously he experienced a sharp pain, and afterwards lost a large quantity of blood from the urethra; and that he was ill for several days in consequence; and that his stricture was not relieved; etc. For our own part, whenever a patient shows this symptom, we write him down as labouring under the particular form of dementia named above; and a certificate of sanity from a committee of psychologists would fail to enforce our belief in such wild stories. But yet, oddly enough, we have not yet seen this peculiar form of delirium described by any of the authors on the subject of stricture. Can it be possible that illusional maundering, such as we have indicated, can have been mistaken for real histories? Most books on stricture contain passages which would favour an affirmative reply, and which suggest the suspicion that, if gentle measures, such as Mr. Smith advises, were intelligently employed, less of such distressing circumstances would be heard.

"It is well to state," says Mr. Smith, "that no one method singly will suit every form of urethral contraction. There will be found several instances in which one plan of treatment alone may suffice for a satisfactory result; but in others it may be advisable and necessary to employ more, or even a modification of the whole combined, so various are the forms of stricture, and so many difficulties may arise during treatment. Before undertaking the treatment of any one form of stricture, it is necessary to bear in mind with what a delicate structure we have to deal. Even in the healthy state, the urethra is a highly sensitive canal, is easily irritated, and rejects force; its mucous membrane is so arranged as to be with facility torn by the introduction of any foreign body. Moreover, the system at large quickly sympathises with the local disturbance which is produced by any interference with the urino-genital organs." (p. 63.)

We have often heard one of the most experienced specialists say, "Whenever I hear a surgeon declare that he invariably uses one form of instrument, I at once conclude that his practical acquaintance with stricture is very limited."

Mr. Smith's mode of conducting dilatation is as follows:—

"Having ascertained the position of the stricture, I take a wax bougie of that size which will enter; and in a bad case this may be No. 2 or 3. This is slowly passed into the stricture and through it, if possible, and the effect upon the parts ascertained. If the bougie traverses the contraction pretty easily, and produces no pain, it may be taken out, and one of a larger size may be put in. As a general rule, the bougie is permitted to remain in the urethra from five to ten minutes . . . . . in a great number of cases the surgeon will be able to proceed with the treatment in the course of two or three days. . . . . If the stricture is a very tight one, and there is much difficulty found in introducing a bougie of this size (one a little larger than the last used), it will be desirable to pass first the very same instrument that was used on the last occasion as the parts in this way will be less stretched. This treatment should be pursued twice or three times a week, until a bougie equal to the size of a No. 6 or 7 can be passed through the stricture. When this has been effected I lay aside the wax bougie, and now begin further dilatation with the metal instrument, either the silver catheter or the solid steel sound." (p. 85.)

The chapter on the treatment of stricture by caustics fully discusses the mode of cure. Mr. Smith, however, omits to mention that Mr. Courtenay, the well known critic of Mr. Syme's perinæal section, and his father before him, have been amongst the earliest and most successful followers of the potassa fusa