movable organs of the body are held and kept in their normal and relative positions and places, out of reach of the otherwise disturbing influence of the superimposed weight of the viscera of the abdomen.

In the six forces which I have thus enumerated, we have presented to us, when defective or deranged, the causes of all uterine displacements. Thus they will be seen to present certain boundary lines which will direct and facilitate our inquiry as to the pathology and treatment of those maladies.

[The lecturer here exhibited a section of a child at birth, in which he had opened the pelvic organs in front, so as to demonstrate the relative positions, size, and length of the parts of generation. Fig. 2.]

[After a *resumé* of his previous statements, Dr. Protheroe Smith showed how the most prominent phases of the generative organs in the successive stages of their development and configuration indicated their peculiar functional signification, and, when deranged or arrested, explained the deformities and displacements of the organs. He added:]

When we reflect upon these peculiarities of form and the essential deviations from the normal standard, especially at the age of puberty, we shall have no difficulty in arriving at the conclusion that, to produce a real inflexion of the uterus, there must be a predisposing cause in the peculiar modification of its tissue antecedent to such a deformity; and that, when no such defects exist, the uterus is not, as a rule, susceptible of accidental inflexion from simple mechanical causes.

An accidental cause, however insufficient in itself to produce a flexion, may still do so under certain physiological conditions, as menstruation, gestation, or abortion, and parturition, which tend to diminish the firmness and change the form of the womb. In confirmation of this theory, instances are not wanting in which, after a confinement or a menstrual period, a violent shock or fall has caused this accident; whilst cases abound in which retroflexion takes place in women who get up and exert themselves too soon after delivery.

In the early days of pregnancy, the junction of neck and body becomes softened, and antelexion usually occurs as a physiological change. This presents to the accoucheur one of the earliest indications of uterogestation; viz., the bulging of the anterior wall of the body felt above the neck, but which is wanting posteriorly. This state, aggravated and more advanced, becomes pathological. Such condition of the uterine tissue, coupled with the increasing heaviness of the gravid fundus, at times offers insufficient resistance to adverse influences of weight, position, and unusual efforts of the patient, and retroversions or retroflexions ensue, usually recognised early, as their beginning is marked by much pelvic and dorsal pain, difficulty in defecation and micturition.

[Dr. Protheroe Smith then exhibited the following table of an ana-

lysis of 213 cases of uterine displacements, taken from the records of his practice at the hospital by Mr. Walter Rigden, the resident physician.]

In this table it was seen—

I. That of 200 instances of uterine displacements, prolapsus numerically takes the lead, being at the rate of 35 per cent.; whilst antelexion 22 per cent., retroversion 21 per cent., retroflexion 20 per cent., stand consecutively next in order; and anteversion, only 2 per cent., gives the lowest figure.

II. That the average age of subjects of anteversion and antelexion is, in the youngest—viz., 28 and 29—explained for the most part by their congenital origin; and retroversion and retroflexion, averaging from 30 to 34 years, point to a more advanced period for their cause.

III. That prolapsus yields by far the greatest number, being 35 per cent., as well as the most advanced average age—viz., 46; and if we include in this division the retroversions, in which the organ occupies the axis of the outlet, and thus takes the first step in its abnormal descent, this numerical excess in favour of prolapsus would attain to the overwhelming superiority of 56 per cent. of the whole number of cases computed.

IV. That amongst the thirty instances of antelexion in the married, only one had a child; besides which only four others became pregnant, but invariably aborted, strikingly illustrating the frequency of sterility in antelexion.

V. That in retroversion and retroflexion, nearly 50 per cent. had borne children; but that in the latter (retroflexion), abortions took a percentage of 8½, whilst anteversion only reckoned 1½ per cent.; and this difference appeared to be due to the structural disease of retroflexion, whereas in anteversion there is only displacement.

VI. The causes of retroversion and retroflexion, independent of congenital predisposition, appeared to consist of protracted labour and falls, strains and excessive bodily efforts at times, when, from the structural condition of the organ, it was most likely to favour such displacements.

In estimating the probable cause and duration of those maladies by the table, Dr. Protheroe Smith could offer only an approximate idea, as the record of the cases cited was incomplete in these particulars. Only four cases were quoted in which absence of the sacro-lumbar curve was wanting; this infrequency arising from the fact that the cases for the most part occurred before this cause of uterine displacements was recognised, and the lecturer had applied to the subject that attention which had since given rise to the various papers and observations which he had published on the influence of position, both as to the cause and treatment of uterine displacements.

Analysis of 213 Cases of Uterine Displacements from the Year 1867, under the care of Dr. PROTHEROE SMITH.—Of the 213 cases, only 200 are included in the table below, 13 being due to external or distinct causes, as tumours, etc.

NATURE OF DISPLACEMENT.	Number of cases.	Average age.	Single.	Married.	MARRIED.				PROBABLE CAUSE.				Average duration in years.	ASSOCIATED DISEASES OR CONDITION.							
					No pregnancy.	Children and no abortions.	Children and abortions.	Abortions and no children.	Fall, strain, or overwork.	Labour.	Inflammation.	Absence of lumbo-sacral curve.		Amenorrhœa.	Ovaritis.	Pelvic cellulitis.	Metritis.	Phthisis.	Pregnancy.	Polypus and pruritus.	Polypus and cancer of liver.
Anteversion	4	29.5	0	4	1	0	3	0	1	2	0	0	10.5	1	0	0	0	0	0	0	0
Anteflexion	44	28.4	14	30	25	1	0	4	12	1	1	1	4.5	1	2	0	0	0	0	0	0
Retroversion	42	30.5	9	33	12	15	5	1	10	3	0	0	5.25	1	2	2	0	0	1	0	0
Retroflexion	40	34.5	7	33	1	15	14	3	5	8	1	3	5.1	0	3	1	2	1	0	1	0
Prolapsus	70	46.	5	65	1	31	31	2	4	9	0	0	7.5	0	1	0	0	0	0	0	1

A CASE PRESENTING THE SYMPTOMS OF ACUTE YELLOW ATROPHY OF THE LIVER: RECOVERY.

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THE rare nature of cases such as that of which I am about briefly to detail the particulars, induces me to bring it before the readers of the BRITISH MEDICAL JOURNAL.

Mrs. B., aged 26, married, pregnant seven months, of a nervous temperament and hysterical tendency, delicate-looking, sent for me on October 18th, 1871. She complained that she suddenly noticed, and

had her attention drawn to, the colour of her skin that evening. She had been greatly depressed lately about her husband's health, who had had slight hæmoptysis; she never completely recovered the shock of seeing the blood which he had spat up, nor the effects of the nurse-tending which his delicacy involved. When I saw her, she had intense pain in the head; her pulse was normal. She was sitting up, and had been attending in her place of business that day up to the time when I was called. I ordered her to go to bed; the next morning I found the pulse natural, no heat of skin, an icteric tint marked over the body, and intense depression of spirits. On examining the liver, I was surprised to find no enlargement; on the contrary, the gland appeared smaller than usual. Nor was there any dullness inferiorly over the lung, nor any symptoms of lung-complication whatever. The bowels

were obstinately costive for some days, and the saline aperient ordered by me the night previously had no effect. She complained that her stomach was so sick that she could take no medicine, and it was from first to last extremely difficult to induce her to take any. I got her to take some small doses of hydrargyrum cum cretâ and bismuth that day, and ordered a warm linseed-poultice over the abdomen. In the evening, she felt herself better; the bowel was slightly moved; and when I visited her, I found that, contrary to my wishes, she had risen from bed and dressed herself. The jaundice, however, was in no way diminished. She took a powder containing ten grains of nitrate of potash, three grains of James's powder, and three grains of grey powder at bedtime. In the middle of the night, labour came rapidly on, and she was delivered of a dead male child after a few labour-pains. So quick was the labour, that the messenger who came for me after summoning the nurse was recalled, as the friends considered it unnecessary to disturb me when they saw her well. The next morning, I found everything going on fairly. She had no pain or tenderness anywhere; the stomach was settled; the mind more cheerful; the pulse perfectly natural. The icterus, however, was rather increased than diminished. The stools passed up to this time were perfectly colourless, and the urine was thick and portery. A peculiar heavy odour was exhaled from the surface of her body; but there was almost unusual clearness over the region of the liver, and an impossibility of feeling the margin of the gland. The bowels not being moved on this day, I gave an enema of oil and yolk of egg and gruel in the evening: this brought away two copious watery discharges (which were not shown me).

On the 20th, I found her restless; the pulse increased in frequency (100). She had had no stool since the enema. She spoke lightly of the loss of her child. The icteric tint was increased. The stomach rejected food; but there was no tenderness save very slightly over the right hypochondriac region. I ordered effervescing citrate of potash mixture and two doses of hydrargyrum cum cretâ and bismuth to be repeated during the day, and warm mustard applications over the liver; small quantities of lime-water and milk; milk and water and fowl-broth as nutriment. In the evening, I found her as in the morning, and ordered a repetition of the enema, as the bowels were not operated on.

October 21st. She was greatly jaundiced. Her mind was wandering; she did not recognise her friends, and was delirious at times, muttering on religious subjects, fancying that a person beside her was Jesus Christ. She had had one small stool, nearly white. The urine was scanty, thick, deep coloured; pulse 115. There was a heavy smell from the body. She lay sunk in the bed, with her eyes closed; and was difficult to rouse. There was no pain or tenderness anywhere. The lochiæ were not suppressed, and of fair colour. She had not the least tympanitis. There was unusual clearness still over the hypochondriac region. She took this day the same nutriment; and a teaspoonful of brandy in milk and wine was added alternately every hour. A saline purgative was given; and, as it did not act, the enema was repeated with assafoetida at night. Mustard stupes and large linseed cataplasm were alternately applied over the abdomen.

On the 22nd, Dr. W. C. Townsend saw her with me. She was much in the same condition as on the previous day. Pulse very weak, 115. Her mind was more disturbed. She took five grains of calomel, in divided doses, at intervals of one hour. The stomach continued weak. She was ordered to continue the effervescing mixture. There was no action of the bowels at night. She had another enema, and, as the straining increased, ten grains of bismuth with a quarter of a grain of morphia, which appeared to have a good effect.

On the 23rd, she was still drowsy, but not so wandering and foolish as on the previous day. She had a draught of infusion of roses and sulphate of magnesia with spirit of chloroform, which operated. There was no change in the stools and urine. At night, she took two pills containing eight grains of compound rhubarb pill, five grains of calomel, and two grains of extract of hyoscyamus. She had two stools in the night, of the same character as before.

On the 24th, there was no sickness of stomach; she was more conscious; the pulse had fallen to 80. She spoke rationally when spoken to. The citrate of potash mixture was continued; and a linseed cataplasm was applied to the abdomen, also mustard stupes; and the pills were repeated at night.

On the 25th, she was much improved; the icteric tint was less; the urine of better colour. There was slight secretion of milk. The head-symptoms were entirely gone. The saline aperient draught was repeated. This brought down frequent copious stools of a watery consistency and of a dark hæmorrhagic nature. The lochiæ had passed in quantity again; and, though there was great weakness and prostration, her general symptoms were much improved.

On the 26th, there was a return of constipation; and on the 27th the stools were again light coloured, but otherwise she was improving. From this date, the stools and urine gradually improved. She continued taking the pills every alternate night, and a mixture containing nitromuriatic acid and calumba. Her strength gradually returned, and I ceased to attend her on November 25th. I have seen her this day (February 24th), in perfect health. She expressed herself "never better in her life".

The peculiar characters of this case, which allied it to the obscure disease "atrophy of the liver", were: 1. Its sudden accession; 2. The slight constitutional disturbance at its commencement; 3. The cephalalgia and dislike to medicine; 4. The obstinate bowel and intolerant stomach; 5. The peculiar head-symptoms, and their rapid and intense occurrence; and, as regards physical signs, 6. The diminished dulness over the liver (I could find no increase over the spleen); 7. The tenderness here also, though not excessive, yet well marked. The stools which she passed on the 26th were most peculiar, occurring when they did; and I had little doubt of their being of a hæmorrhagic nature. I may also remark that, with the exception of a few days, the pulse was not much disturbed, its beat being 75 to 80.

ON A METHOD OF DETECTING SMALL QUANTITIES OF SUGAR IN URINE.

By J. SEEGEN, M.D., Professor in the University of Vienna.

TROMMER's is the most reliable and delicate test for sugar. With its aid, I am able with certainty to make out 0.3 milligramme (0.0046 grain) of sugar dissolved in 10,000 times the amount of fluid. This great delicacy of the test, however, only holds good as long as we have to do with a watery solution of sugar. If, on the contrary, small quantities of sugar are to be detected in urine, Trommer's test is neither delicate enough nor reliable, for two reasons. 1. Urine contains certain substances (colouring matters, creatine) which prevent the suboxide of copper when formed from being precipitated; no separation of the reduced suboxide of copper, therefore, takes place, the blue fluid only becoming yellow or yellowish-brown, or presenting a turbid discoloration. 2. The same processes of reduction are also brought about by uric acid; and urine, containing a considerable amount of uric acid, acts on Fehling's test-fluid exactly in the same manner as urine containing 0.1 to 0.2 per cent. of sugar.

The method devised by me has for its object the exclusion of those other constituents of urine which would disturb the proper action of the test, and the transformation, as it were, of the saccharine urine into a watery solution of sugar. Animal charcoal has the property of retaining most of the constituents of urine, more especially the colouring matters and uric acid. After filtering a watery solution of uric acid through animal charcoal I could (provided the charcoal had been good), after repeated filtrations, not find a trace of uric acid in the filtered fluid. Now, in order to detect small quantities of sugar in urine, I proceed in the following manner.

I filter one or two ounces of the urine several times through good animal charcoal until the urine is completely colourless. This operation only takes a few minutes. Then I wash the charcoal on the filter with a little distilled water, and to this water, when filtered off, I apply Trommer's test. The water with which the charcoal has been washed is almost as sensitive to Trommer's test as a watery solution of sugar, and in it I could detect even 0.01 per cent. of sugar by a beautiful red precipitate of suboxide of copper, whilst the original saccharine urine, when not filtered, only produces a yellow discoloration of Fehling's test-fluid. With urine containing a little more sugar—say, 0.1 to 0.2 per cent.—the water flowing off from the second and third washing acts even more energetically upon the test-fluid than that of the first washing, producing an even purer deposit of suboxide of copper. The water obtained by the subsequent washings thus evidently contains the sugar in a purer form. With normal urine, the water obtained by the above process is either entirely inactive towards Fehling's test-fluid, which remains blue, or it assumes only after a while a slight dichroid (varying colour according as the light falls on or passes through) turbidity. The water obtained by a second and third washing always remains without any effect. When the quantity of sugar has to be determined, the urine must not be filtered through charcoal, as the latter always retains a certain quantity of the sugar which cannot be removed again by washing.