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.