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PYELITIS COMPLICATING PREGNANCY.[1]

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ONE of the pathological storms which may arise to disturb the physiological calm of a normal pregnancy is an acute attack of pyelitis. This condition as a complication quite frequent in pregnancy and quite often wrongly diagnosed, was brought prominently before the profession by Reblaud at the Surgical Congress in 1892. Since then a number of observers have reported series of cases which demonstrate that the condition is by no means rare. The latest series comes from Cragin, who reported at the last meeting of the American Gynecological Society ten cases of pyelitis complicating pregnancy, four of which he had met with during the preceding winter.

The pyelitis develops primarily in the right kidney according

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to the cases so far reported, and the preference for the right side is accounted for by the obliquity of the uterus to the right, together with the fact that the presenting part usually engages in the right oblique diameter. The compression of the ureter and the consequent dilatation of the pelvis of the kidney with urine furnishes a soil suitable for the growth and development of germs. Vinay believes that the colon bacillus is responsible for most of these cases of pyelitis and that the colon bacillus can migrate directly through the walls of the intestine and the ureter to reach the pent-up urine. That other germs may and do cause this condition is proven by experiments on dogs and by a few cases where the streptococcus and the gonococcus have been found in the urine.

The symptoms are few and often misleading. Cystitis may precede, but usually follows the attack of pyelitis. Chills are frequent and are followed by an irregular temperature varying from 100° to 105° F., lasting in favorable cases about a week. Sharp pain is complained of which may be referred to the kidney region or may be directly over McBurney's point, as in one of the cases reported by Cragin. At times there is general abdominal pain which causes the patient to draw up the right leg.

So far the diagnosis might point toward one of the fevers such as typhoid or malaria, or toward one of the local inflammations such as appendicitis, salpingitis, cholecystitis or pyelitis. An examination of the blood will usually contract the diagnosis to the surgical diseases mentioned and a vaginal examination will usually exclude the salpingitis. Of the remaining conditions a diagnosis of pyelitis will be made positive or negative by a careful chemical, microscopical and bacteriological examination of the urine. The urine of pyelitis is acid, cloudy, and contains albumin, pus, casts and bacteria. Pus is always present and usually in large quantities. Albumin casts and bacteria vary in quantity and are sometimes not found.

The prognosis is always serious. As the pyelitis depends upon the mechanical obstruction caused by the fetal head, relief by emptying the uterus can always be obtained before the mother's life is sacrificed. But she is liable to an extension of the infection into the kidney substance as long as the pyelitis exists. One case has been reported where the infection extended to the other kidney with a fatal result. The fetus is endangered by the high fever and the occasional necessity of being prematurely delivered.

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Treatment consists in applying cold to the region of the diseased kidney, in giving the patient large quantities of water containing urinary antiseptics, and in keeping her in bed upon a milk diet. Occasionally cold baths to reduce the temperature for the relief of the fetus are indicated. Williams advocates the induction of premature labor, but the majority of obstetricians believe that this is rarely necessary. Surgical interference with the kidney is at times necessary.

The following case was referred to me in August, 1903, by Dr. C. A. Clinton:

Primipara, æt. 24. Family history, negative; personal history, scarlet fever when a child, but no trouble with the kidney following it. Shortly after marriage the patient suffered with cystitis, followed by pain in the right lumbar region, and accompanied by chills and fever. A nephrotomy of the right kidney terminated in relief of symptoms. She became pregnant four months later. Her last menstruation began March 25, 1903. Pregnancy was normal until the eighteenth week, when on the day she first felt fetal movements she suffered with pain in right groin, general abdominal pain and a chill. An irregular temperature followed, varying from 100° to 104°, which lasted one week. The urine was acid, cloudy, 1,023, and contained a large quantity of pus and epithelial cells. There were no casts and the filtered urine contained no albumin. The patient was confined to bed, given a milk diet and large quantities of water, together with urotropin. Three weeks after this attack the patient was turned over to me.

She had no pain and considered herself well. The twenty-four hours urine amounted to 2,000 cc. It was alkalin, cloudy, did not contain albumin, sugar or casts, but did contain a considerable amount of pus. The urea output was nine-tenths per cent. Abdominal examination gave evidence that the fetus was presenting by the breech. The fetal heart was to the right of the umbilicus, 160, and strong. The pelvis was contracted, of the simple flat type. The external conjugate measured 18 cm., the internal conjugate 9 cm. The vaginal secretion was normal. She was given urotropin continuously for more than two months, and then, as the urine persisted clear with only a slight amount of pus, medication was stopped. On December 4th, three weeks later, she complained of dizzy spells, but the urine remained clear. On December 12th she had a chill and severe pain in her right side. This was about the thirty-sixth week of her pregnancy.

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The urine was acid, 1,020, contained a trace of albumin and a large quantity of pus. An irregular temperature followed the chill, which persisted one week. On December 17th the temperature was 103.4, pulse 104; fetal heart between 180 and 190. A leucocytosis of 10,400 was present. Treatment had been the same as with the previous attack. As the fetus showed such evident signs of distress premature labor was considered, but it was first decided to try the effects of cold baths. Bed baths of cold water and alcohol were given every four hours, with the result that after the third bath the patient's pulse and temperature returned to normal and the fetal heart dropped to 144 and was strong and regular. The urine gradually cleared of pus under a continued treatment with the urinary antiseptics. It was necessary to do a partial internal podalic version four weeks later. There was no fever during the puerperal period. By the eighth day post-partum there was only a very slight amount of pus in the urine. In spite of the fact that the baby's eyes were treated with a 2-per-cent. solution of silver nitrate at birth, on the eighth day a severe conjunctivitis of the right eye developed, which was finally controlled by the usual methods. The patient has had no trouble with her kidney for over a year, but the urine still contains a few pus cells.

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