REPORT OF THREE CASES OF PREGNANCY FOLLOWING SALPINGECTOMY.*

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THE vagaries of the fecundated ovum, in selecting a location for its development, and the persistence and penetrability of the spermatozoa in its effort to reach the object of its search,

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is well illustrated in the following histories, one of which shows that even after a double salpingectomy has been done, and the cornual portion of the tube excised, *it is still possible* for pregnancy to occur.

CASE I.—S. K., aged twenty-one, born in Austria, married three years, presented herself for examination on March 9, 1906. She had always been well until she married and became pregnant. She had had one child two years before, and no miscarriages. The birth was easy and she had remained in bed two weeks, but since that time she has complained of constant pain in the left inguinal region. Her menses occurred at sixteen, and recurred every twenty-five days. The period lasted four days, and was accompanied with cramps and backache on the first day, at which time the left-sided pain was relieved. She further reported that she had a profuse mucopurulent leukorrhea, and frequent and burning urination.

On examination we noted a laceration of the pelvic floor, a bilateral laceration of the cervix, with erosion, a left salpingitis, a cystic and prolapsed left ovary, and a tender appendix.

She was referred to the hospital, and was operated upon March 17, 1906, at which time the perineum was repaired, the uterus cureted, the left tube and ovary removed, and an appendectomy performed. Her recovery was uneventful.

In May, 1906, she again presented herself for examination, saying that she had felt perfectly well for about six weeks, when she had begun to have pain and a burning sensation in her right side. At this time she presented a tender right tube. After a few local treatments she was lost track of, and not seen again until June 1, 1909.

In the intervening three years she had borne two children, and now complained of pain in both sides, backache and an increased menstrual flow. Examination showed a marked relaxation of the pelvic outlet, a small anteflexed tender uterus, and an enlarged tender right tube. She was again referred to the hospital, the uterus cureted, the cervix amputated, the pelvic floor restored, and the right tube removed. Her immediate recovery was uneventful.

In October, 1909, four months later, she again appeared, having skipped two menstrual periods, and complaining of morning nausea. On examination, the uterus was found enlarged and anteflexed to the size of a ten weeks' pregnancy. The possibility of impregnation being questioned, she was asked to return again for subsequent examination, at which time the uterus showed further development, and a positive diagnosis of pregnancy was made. She had been attended in an uncomplicated labor by one of my associates.

CASE II.—The second case illustrates the migratory powers of the spermatozoa. R. S., a Russian, aged twenty-eight, was admitted to my service in the Jewish Hospital on May, 4 1908. Her previous history was as follows· Her menses had

occurred at twelve and recurred regularly every twenty-eight days until she married. She had had two children, both easy births, and five consecutive miscarriages following the birth of her last child. She had no surgical treatment for any of these abortions. Her last menstruation was on February 28, 1908. She had complained during March of pelvic pain, and had skipped her period. In April, a bloody vaginal flow appeared at the regular time, this metrorrhagia was irregular and was accompanied with intense abdominal pain, cramp-like in character, referred to the lower quadrant of the abdomen. She continued to have more or less pain for two days (April 27–28) which coincided with the occurrence of the bleeding. These symptoms were attended with several fainting spells.

On admission her hemoglobin was 55 per cent., and the red cell count 3,984,000. A tender mass was noted to the right and posterior of the uterus. A tentative diagnosis was made of "ovarian cyst with twisted pedicle, or unruptured ectopic." On operation the former diagnosis was confirmed. A small dermoid of the right ovary with the tube of that side was removed, care being taken to *excise* the uterine end of the tube well into the right cornu. This line of incision was closed with a continuous catgut suture, care being taken to close the uterine muscle and peritoneum over the tubal ostium. Her recovery was uneventful, and she was discharged from the hospital on June 1, 1908.

This same patient was admitted to my service in the Williamsburgh Hospital in September, 1908. She was in profound shock, pallid and pulseless at the wrist. Her abdomen was extremely distended, and dullness could be elicited in both flanks. Her rectal temperature was 102. Her history showed that she had skipped two periods, but had had no metrorrhagia up to the time she was seized with sudden and excruciating pain in the lower abdomen.

Vaginal examination was unsatisfactory, owing to the exquisite tenderness within the pelvis; the uterus,however, could be made out anterior to a pelvic fullness in the pouch of Douglas. The diagnosis of ectopic was made. Her condition was so desperate that my associate, Dr. Matheson, decided to defer the operation until reaction had occurred. She was placed in the elevated foot posture, kept at rest, and 1/2 grain of morphine given. Her hemoglobin was 40 per cent., but did not continue to drop. On the third day after admission, her condition was such as to permit operation, which was done by Dr. Matheson, who found the abdomen full of clotted blood, due to a ruptured interstitial pregnancy at the right cornu of the uterus. No active bleeding was going on at the time of the operation. The cornu was excised so that the musculature might be accurately coapated, and the hemorrhage controlled by deep interrupted sutures through the uterine muscle. The abdomen was closed in layers, and a smooth recovery followed. The point of interest in the case is: How did the fecundated

ovum migrate into the interstitial portion of the right tube, and develop there, when that tube had been previously excised, and the muscle and peritoneum closed over its abdominal ostium?

CASE III.—My third case was in a woman of twenty-six, who had been operated by a general surgeon. She had been married seventeen years and had never been pregnant, owing to a gonorrhea which she had contracted from her husband shortly after marriage. Both tubes had become infected, which infection necessitated their removal.

From the hospital records no description of the operative technic could be learned; it is presumed, however, from my subsequent findings, that the tubes had been ligated and ablated, and had not been excised.

On March 15, 1909, she was admitted to my service presenting the following history: She had menstruated regularly until January 22, 1909, which was her last period. No flow appeared in February, but on March 8 she had a severe attack of abdominal pain, which lasted several hours, and was followed by metrorrhagia. The pain and soreness which had continued to date became localized in the right lower quadrant. She had vomited with the onset of the pain, but had had no fever.

On admission she was pallid, the abdomen distended and exquisitely sensitive over the lower right quadrant. The pelvic examination was indefinite and unsatisfactory, extreme sensitiveness on moving the cervix being the only positive finding. A presumptive diagnosis of ectopic was made, which was strengthened by the blood examination, which showed 4,000,000 red, 24,000 white, and 65 per cent. hemoglobin. She was prepared for operation, and on the following morning, under ether narcosis, the culdesac was opened from below and the presence of free blood demonstrated. This confirmed the diagnosis. A right rectus incision was then made and the peritoneum opened from above. A large amount of dark clotted blood escaped. After packing off the intestines with a sterile gauze roll, the pelvic organs were exposed and an interstitial pregnancy of about eight weeks' development was found in the stump of the right tube, which was attached to the ovary of that side by adhesions. The confining sac was ruptured at several points, but no active bleeding was in progress. The gestation sac and the right cornu of the uterus were excised, and the uterine wound closed with interrupted sutures.

It was noted that the remains of the left tube, 1.5 cm. long, projected from the left uterine cornu. Time or the patient's condition did not admit of the resection of this tubal stump. A quart of saline solution was left in the abdomen, and the wound closed in layers. Her recovery was prompt and uneventful.

This case illustrates the possibility of tubal stumps becoming patent after ligation and ablation of the free and isthmic portions of the tube.

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