

he subconsciously recognizes the change brought about by the perforation. And herein must the surgeon, seeing the case for the first time, accept the opinion of the physician.

The three cardinal symptoms are these: Suddenly-appearing abdominal pain, rigidity of the muscle wall and tenderness on pressure. When these appear in the course of any case of typhoid fever the assumption is warranted that perforation has occurred, and operation is not only indicated but demanded.

Clinical Notes

ECTOPIC GESTATION—A REPORT OF TWO CASES.

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CASE 1.—Tubal pregnancy; rupture within the broad ligament. Case mistaken for acute perforating appendicitis. Operation, hysterectomy, recovery.

History.—On Aug. 21, 1906, I was called in haste to see Mrs. M. L., widow, aged 28. I found her in bed in much distress and obtained the following history: While walking downtown about 10 a. m. that morning she was taken suddenly ill with a severe pain in the lower abdomen, most marked on the right side. She became very faint and fell to her knees and was unable to rise to her feet for some minutes. She continued her journey downtown, but on account of pain and weakness was obliged frequently to sit down. After doing her errand, she took a car to her home; the car left her within four blocks of her house. One-half hour was consumed in traversing this distance owing to pain and faintness. She immediately went to bed and had remained there until I saw her at 7 p. m. the same day.

Examination.—Pulse, 160; temperature, 103 F.; respiration, 40. The face had an anxious expression and was pale. The abdomen was distended and very sensitive over the lower portion. She had vomited several times during the afternoon. She gave a history of former attacks of pain in the lower abdomen, more characteristic of pelvic than appendiceal trouble. A pelvic examination revealed nothing but a very sensitive condition of the pelvic organs and tissues.

Sexual History.—She menstruated before the age of 13 years. She was normal in this respect during her single life. She married at 20 and has had four children at term and two miscarriages. The labors were normal. Two children died in infancy. The miscarriages occurred between the births of the children. Two years ago had an eruption on the face and forehead in the papules of which pus formed, then scabs. When the scabs fell off, the skin was left disfigured by large deep cicatrices. She took constitutional and local treatment for nine months at this time. She denies specific disease. She menstruated last during the first week of July. The August period did not appear.

Diagnosis.—Fulminating appendicitis, with rupture of the appendix and septic peritonitis.

Treatment.—Her condition was such as to preclude operation, but she was sent to the hospital for treatment. I expected her to die, but after several days she began to improve. Her pulse grew slower and stronger and the fever gradually subsided; the distended and sensitive abdomen improved. In the hospital she flowed four days and flowed irregularly after leaving the hospital for two weeks.

Subsequent History.—She returned to her home September 8 after being in the hospital 15 days, and I congratulated myself on not operating on a case of appendicitis that in that stage would certainly have proved fatal. She was requested to return in a few weeks for examination and operation.

About three weeks later she came to my office. An examination revealed a mass about the size of a full-term fetal head lying behind and above the pubes, occupying the position of a

pregnant uterus, extending laterally into the left pelvis. It simulated very perfectly a myomatous uterus. I immediately revised my diagnosis.

Second Diagnosis.—Tubal pregnancy with rupture into the broad ligament.

Treatment.—I sent the patient back to the hospital at once and two days later (Sept. 27, 1906) operated on her. The incision was central. A large hematoma occupied the broad ligament space and had pushed up the peritoneum in front of and around the uterus. Portions of the parietal wall and omentum were adherent to the mass. The peritoneum was incised over the mass and a large quantity of firm blood clots was scooped out with the hand. What appeared to be one of these clots was felt by the hand and crushed between the thumb and fingers. Immediately there was an alarming gush of arterial blood that could not be controlled by pressure or by sponge packing. I removed the left hand from the sac occupied by the hematoma and thrust it down into the pelvis behind the uterus and raised the entire pelvic contents up toward the abdominal incision, thus rendering the broad ligaments taut, completely controlling the hemorrhage. While held thus, the other hand cleared away the blood clots so that the field could be inspected. I thus discovered that the hematoma had so impinged on the blood supply of the uterus that the uterine walls had become friable and crushed between my fingers.

The broad ligaments were then clamped and ligated and the uterus removed by the usual method of amputation above the cervix. The left ovary was not removed. Gauze and tube drainage were employed for four days. The patient made a rapid and uncomplicated recovery.

Later History.—I saw this patient, who now lives in Chicago on March 22, 1907. She is in excellent health; has gained 15 pounds since her operation. She menstruates every 28 or 30 days, at which time she has some pelvic pain. She has married again and says that her only worry is that she may again become pregnant, a matter about which I was able to put her mind at rest. On examination I found an unusually long uterine stump, the probe entering the cervix to the depth of three inches. It is probably owing to this fact and that one ovary still remains that the patient has this phenomenal menstruation.

Dr. Maximilian Herzog, who examined the tissues removed, reported as follows:

The specimen proves the correctness of your diagnosis, namely, hemorrhage into the broad ligament from ruptured tubal pregnancy.

The mass consists of tissues of the tube and ovary, old coagulated blood, blood derivatives and fibrin, and included in these masses degenerated chorionic villi. The latter proves beyond any doubt that an ectopic gestation had existed.

DIFFERENTIAL DIAGNOSIS.

In ectopic gestation with rupture of the fetal sac we have as the three cardinal symptoms: (1) Sudden pain in the lower abdomen; (2) subnormal temperature (when blood extravasation is great) or no increase of temperature and, (3) acute anemia.

When I saw the patient nine hours had elapsed since the time of the beginning of her illness and she presented the four cardinal symptoms of appendicitis given by Dr. J. B. Murphy:¹ (1) Sudden pain in the abdomen; (2) nausea or vomiting; (3) general abdominal sensitiveness most marked on the right side; (4) elevation of temperature. But the important thing in the differential diagnosis was the nine hours that had passed from the time of the beginning of the attack to the time I first saw the patient, a matter that did not receive proper recognition.

In that length of time she had partially reacted from the shock caused by loss of blood and traumatism to the peritoneum and a limited peritonitis had become es-

1. Murphy (J. B.): Two Thousand Operations for Appendicitis, The Amer. Jour. Med. Sci., August, 1904.

tablished, so that instead of a normal or subnormal temperature, there was an elevation of temperature of 4.5 degrees.

Another most interesting point in the case is the character of the hematoma, i. e., its assuming such a relation as to interfere with the blood supply of the uterus, causing disintegration of its muscular tissue and at the same time simulating so perfectly in its position and consistency a fibroid uterus.

It is interesting to speculate on what the outcome of such a case might be without surgical interference.

In many parts of the body less favorable to absorption, hematomas are completely decimated. An early rupture into the broad ligament is one of the most favorable conditions for recovery without interference, especially if the rupture is accompanied by the death of the embryo. But when a hematoma is formed in this manner it must be remembered that the sac enclosing it communicates with the Fallopian tube, within which may be harbored pathogenic bacteria, and this tube in turn may, and usually does, communicate with the uterus and through the uterus with the external world.

It may be said, therefore, that the hematoma, which is an excellent culture medium, is subjected in a greater or less degree to infection by micro-organisms finding their way through the uterus and Fallopian tube or from the intestines, and the patient may locally or constitutionally be infected through an abscess thus formed.

In this particular case the operation demonstrated an unusual condition of things. The nutrition of the uterus had been so seriously interfered with that the muscular tissue had undergone grave degenerative changes. Whether this breaking down of the uterine tissue would have ultimately resulted in forming a communication between the folds of the broad ligament and the uterine cavity and thus permitted the expulsion of the disintegrated hematoma and the products of a tubal pregnancy is a matter of conjecture.

Observers have reported that even the bones of the fetus have been expelled through the uterus, rectum perineum, gluteal muscles and abdominal wall. A case of the fetal sac adhering to and ulcerating through the uterus and discharging bones into the vagina is that of Bertino's referred to by Dr. Heineck.² The rest of the bones were removed by laparotomy eighteen months after the death of the fetus.

The efforts of Nature to remove the products of an ectopic gestation have been so faulty, and the dangers to the mother are so great, that we are justified in operating even if we know that some of the most favorable cases recover without interference. In fact, surgical interference is demanded in the light of to-day.

CASE 2.—Mrs. F. H. On Feb. 12, 1904, I operated in a case of ectopic gestation, the principal features of interest being that the patient had been ill for a week from extensive hemorrhage into the abdominal cavity and the gestation sac was found engrafted into the infundibulum and fimbriated extremities. The patient recovered.

ETIOLOGY.

The observations of Dr. J. Clarence Webster on the etiology of ectopic gestation are of interest. He claims that the idea of early writers of a mechanical interference to the advancement of the ovum toward the

uterus being the cause, has no foundation of fact. He says:³

In 1895 the author pointed out that these views were largely speculative. He showed that, while frequently these mechanical factors might be associated with ectopic pregnancy, there was no proof that they were the ultimate factors in its causation. He demonstrated the existence of the decidual reaction in the tubal mucosa in all cases of tubal pregnancy, and advanced the view that the fertilized ovum could develop only on tissue capable of undergoing a genetic reaction. Normally in the human female this reaction, occurring as the result of fertilization, takes place in the mucosa of the uterus. Its occasional occurrence in other parts derived from the Müllerian tract, i. e., Fallopian tubes, is to be regarded as a reversion in these tissues to an earlier mammalian type either in structure or in reaction tendency. The fertilized ovum coming in contact with any portion of the Müllerian tract capable of establishing with it the relationship necessary to its development may become attached and grow just as readily as if it were lodged in the uterine cavity. . . . It is, however, an unjustifiable assumption to hold that the ovum, if simply obstructed in its downward movement, may develop in a tubal mucosa that is perfectly normal or altered by inflammation. . . . The author strongly holds that there is no proof whatever that ectopic pregnancy begins its development on any other than Müllerian tissue. . . . In the rare condition of ovarian pregnancy it is not at all unlikely that the presence of Müllerian remains in the ovary may determine the site of pregnancy in this organ.

Certainly such views are in accord with the generally established principles of evolution.

If the determining factor in ectopic pregnancies were only a mechanical one the condition would be seen much more frequently than it now is. Furthermore, the mechanical factors that would interfere with the progress of the ovum downward would also be likely to interfere with the advancement of the sperm cell along the tube and be the determining factor in the production of sterility.

Undoubtedly, ectopic gestation occurs much more frequently than is generally supposed. Many obscure cases of illness in women in times past would to-day be attributed to this cause.

Like every other malady in the catalogue of diseases, it becomes more common as we become more proficient in the art of recognizing it. In every woman capable of impregnation a sudden attack of pain in the lower abdomen, faintness, acute anemia and nausea without elevation of temperature, should raise the question of the possibility of this condition in the mind of the physician.

A METHOD OF PRESERVING AND FILING MEDICAL RECORDS

BY MEANS OF SPECIAL ENVELOPES OR POCKETS.*

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No one will deny the advantage, I might even say the necessity, of keeping a careful record of medical cases. Such records are now kept with more or less care in most hospitals and dispensaries, as well as by many physicians in private practice. It is probable, however, that most practitioners are lax in this respect, especially in cases seen away from their offices, largely, no doubt, for the lack of a convenient system. In this paper I will confine myself principally to the methods of preserving

2. Heineck (Aimé Paul): *The Terminations and Treatment of Extrauterine Pregnancy, with a Report of Thirty-Two Cases Treated at the Cook County Hospital, Surg., Gyn. and Obst., March, 1906.*

3. Webster (J. Clarence): *Text-book of Diseases of Women*, p. 643.

*Read at the Northwestern Medical Society of Philadelphia, March 4, 1907.