DISCUSSION.

Dr. T. B. EASTMAN, Indianapolis, said that a woman was referred to him with what had been diagnosed as a labial abscess on the right side. It had been incised several times, but the discharge continued. Dr. Eastman made a free incision and after a rather difficult dissection he came on a badly inflamed appendix which was open at the end and discharging pus. Of course this was responsible for the patient's condition. Dr. Eastman removed the appendix and the patient made a good recovery.

Dr. A. GOLDSPOHN, Chicago, stated that a number of years ago a woman of at least 60 years of age came under his care as a hospital patient. She had always been fairly healthy, and she had a femoral hernia of small dimensions that had not given her much trouble. It became irreducible, however, and occasioned more or less pain, and she had had something of a convulsion, as her illiterate relatives described it. Examination showed a small tumor in the region of the left femoral ring, corresponding to a femoral hernia, that was not reducible by ordinary taxis. On opening the sac the ovary became apparent; it was adherent, with a small amount of omentum. The operation presented no difficulty and the patient made a good recovery.

SOME COMPLICATIONS OF PREGNANCY. TREATED SURGICALLY.*

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Within comparatively few years, our knowledge of appendicitis and neoplasms, complicating pregnancy, has been considerably increased.

As a rule, the surgeon has been called to treat these conditions, and therefore they have been studied more from the standpoint of the influence of such operations on pregnancy than of pregnancy on conditions which otherwise might be considered operative.

In this country continuous observation of a woman during pregnancy is almost unknown.

The number of complicated cases, therefore, which have been observed by any one individual has been limited. It is true that in some well-to-do families observation is practiced; but as the importance of this observation is recognized, the occasions for it decrease.

Most obstetrical cases are in charge of general practitioners, and this condition will, undoubtedly, continue. The combination of a skilled obstetrician and surgeon is not a common one, and while the obstetrician may be most skillful in all that pertains to diagnosis of position and in the performance of obstetrical operations, the men in charge of these cases still turn to the surgeon when other operative complications are present.

Surgical interference has also been encouraged by the attitude of obstetricians toward "operative delivery" in cases which may be called, from the surgical standpoint, uncomplicated. This is on the increase, especially in large cities,¹ and, undoubtedly, tends to encourage surgical intervention in a growing list of obstetrical conditions. The practitioner, who has seen the development of "surgical trusts" under the name of "hospitals," hesitates when he considers what his financial end is to be if he further countenances the fallacious idea that patients can not be successfully treated at home.

On the other hand, the desire for personal consideration and to remain at home, if possible, is still strong among those who have not contracted "the hospital habit."

With the large number of competent operators who desire only fair remuneration for services rendered it rests with the general practitioner whether or not he will lose the best part of his practice among the great middle class as he has lost it among what may be considered the opulent poor and the economically inclined opulent.

The care of the pregnant woman is by far our most important duty, and any improvement in treatment or in the care which tends to lessen her dangers during this trying period is of utmost importance.

The value of recognizing deviations from the normal early in the conduct of these cases can not be overestimated; acting with conservative promptness in the presence of dangerous complications will save many lives, both fetal and maternal.

Surgical interference is more important in certain conditions in the pregnant than in the non-pregnant.

It has long been an accepted fact that high maternal temperatures are dangerous to intrauterine life, and that when the temperature runs over 104 F. for a continued period of time, no matter from what cause, it is invariably fatal to the child *in utero*.²

Suppurative conditions with much lower temperature are dangerous, especially if the process is active in close relation to the uterus.

The study by Straviskiadis of twenty-four cases, including pneumonia, typhoid fever, pyemia, etc., in which macroscopic, microscopic and bacteriologic examinations were made, is a distinct addition to our knowledge of this subject. His conclusions are: 1. An acute endometritis which is often hemorrhagic is of frequent occurrence in acute, infectious disease. 2. This inflammation is caused by the specific bacteria that caused the disease or a complication. 3. Particularly favorable conditions are present during pregnancy and the puerperium for the increase of the bacteria which reach the uterus through the blood current. 4. Abortion or premature labor is frequently due to endometritis of hematogenous origin.³

The intimate relation existing between the appendicular lymphatics and those of the broad ligament is of importance in determining the influence of septic conditions of the appendix on pregnancy;⁴ but the hematogenous channel, in view of the fact that there is increasing evidence that septic emboli may cause disturbances in the gastrointestinal mucous membrane and elsewhere seems the most probable route of endometrial infection.⁵

APPENDICITIS.

Appendicitis frequently complicates pregnancy. The condition of obstinate and continued constipation which is so frequent during pregnancy must be looked on as a predisposing cause. Add to this increasing deviation from the usual physiologic condition of the pelvic organs of women between the ages of 15 and 45, the mechanical disturbances and congestion resulting from the rapidly growing uterus, and the wonder increases that troubles are not more common. In many cases an absolute diagnosis has not been made, because of the mildness of the symptoms.

In the diagnosis of appendicitis during pregnancy the usual signs may be obscured. Vomiting is often concurrent with pregnancy. As a rule, the pain is localized at the diaphragmatic attachments, while accelera-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Voorhees: Am. Jour. Ob., January, 1905.

2. MacPhatter: New York Med. Journal, 1901.

3. Monat. F. Geb. und Gyn., Berlin, 1903.

4. Clado: Bend. Soc. de Biol. Paris, 1892, vol. iv.

5. Fowler: Brooklyn Med. Jour., July, 1903.

tion of the pulse and elevation of the temperature are exceptional.⁶

Incessant vomiting may be due to uremia, and abdominal pain with vomiting has been seen "preceding uremic convulsions of puerperal nephritis."⁷

The importance of leucocytosis, if found, associated with localizing pain, during the first six or seven months of pregnancy, is considerable in making a diagnosis. Its value as far as indicating need of operation is apt to be overrated. "At the same time, leucocyte counts are valuable, and a rising count is of more importance than the absolute number."⁸

A constant, high leucocytosis (20,000 to 30,000) in appendicitis always points to the existence of a purulent process, providing there are no other complications to which the leucocytosis may be attributed. "In diffuse peritonitis the leucocyte count loses its certainty."⁹

Taken by itself, it is apt to be misleading, but taken in connection with other signs, it may be of great value in doubtful cases.

There is but one point in the diagnosis which I wish to emphasize: If there is cessation of pain without amelioration of local signs, operation is indicated at once.

The relief of tension brought about by perforation of the appendicular wall will be followed, in a few hours, by an increase in the infected area, making the results of an operation more doubtful.

The first case here reported is one of appendicitis complicating pregnancy, in which a gangrenous appendix was removed at three and one-half months, and in which, aside from a few uterine contractions set up by the removal of gauze drainage, on the fourth day proceeded to term and the patient had a normal confinement.

CASE 1.—Mrs. L. W., aged 36, had been married three years.

History.—In October, 1900, gave birth to a son; labor was tedious, but aside from this there was nothing abnormal noted about the pregnancy or the puerperium. She became pregnant again in May, 1901. On Aug. 9, 1901, about 11 p. m., she was seized with a severe pain in the epigastrium, accompanied by nausea and vomiting; the bowels were and had been constipated; the symptoms continued through the night.

Examination.—Dr. H. W. Dudley of Abington was called on the morning of August 10; he found the patient with a temperature of 100 F., pulse 90. Pain was unremitting and the vomiting continued. There was marked rigidity of the abdominal muscles, especially on the right side, and the pain, worse at first in the epigastrium, had localized at McBurney's point. Hot fomentations were applied, and the same afternoon I saw her in consultation with Drs. Dudley, Wheatley of North Abington and Osgood of Rockland, the two latter afterward assisting at the operation. At 5 p. m., when I saw her for the first time, the pain of which she had been complaining had in great measure ceased and there had been no nausea for some hours. Temperature was 100.5, pulse 110. Rigidity of the abdominal muscles was very marked, especially of the right rectus, and even moderate pressure over location of the appendix gave rise to pain. Believing that the cessation of pain without amelioration of local signs was not a favorable symptom, and not willing to temporize on account of the existing pregnancy, operation was advised.

Operation.—The usual preparations for an operation in a private house were made.¹⁰ Under ether, a two-inch incision, afterward enlarged to three, was made through the outer border of the right rectus muscle. On opening the peritoneum, the appendix was found directly under the incision; it was

dark colored, full of concretions and surrounded by purulent serum which was partially walled off by fresh adhesions of the omentum. Cloudy serum also welled up from the direction of the pelvis. This was carefully sponged out. The appendix was removed in the usual way, one strip of gauze packing was passed down to the stump and another strip passed down to drain the pelvis. The incision was closed by through-and-through sutures of silkworm gut, except for about an inch at lower angle of incision, through which the gauze drains were brought out.

Result.—From the time of operation until the gauze was removed, four days later, there was nothing out of the ordinary to report. After the packing was removed, the patient had two or three attacks of syncope which seemed quite threatening, accompanied by regular rhythmical pains, threatening abortion, but the pain was easily controlled by morphin sulphate administered subcutaneously, and the syncope was treated by alcoholic stimulation.

Subsequent History.—Recovery from this point was uneventful, and the patient was up in three weeks, the abdominal incision being entirely closed. Pregnancy continued until Feb. 26, 1902, when the patient was delivered of an eight-pound daughter. Labor was easy. There was no pain or bulging in the cicatrix from operation. In fact, there has been at no time during the pregnancy or puerperium any bulging of the scar.

Abortion, from conditions either present at the time of operation or which develop after such interference, adds much to the gravity of the prognosis.

Obstruction of the bowel or ileus is not uncommon, especially after operation for suppuration. Operation causes a change in the peritoneum, so that the clinical picture is entirely changed and the usual warning signs are absent.

Temperature and pulse with obstruction may be normal. There may be no marked distension, there may be continued vomiting of dark or fetal matter. There are no colicky attacks.

The most important diagnostic sign is dullness in the flanks, which progressively increases.

Next to this in importance is the facial expression, which, with obstruction, is drawn and anxious.

There is no pain and the patient is comfortable aside from the trouble of vomiting.

There is absence of marked abdominal rigidity.

Treatment consists in change of position, cathartics, followed by enemata, and large doses of atropin until appearance of toxic effects. If response to this treatment is not reasonably prompt, reopening of the wound, with incision of distended loops of intestine, followed in severe cases by tying a Mixter tube into the cecum will give the best results.

The second case was complicated by ileus. There was a fecal fistula and the abortion of a dead fetus. Recovery took place, with spontaneous healing of fecal fistula.

CASE 2.—Dr. R. M. Birmingham, Lawrence, Mass.

Patient.—Mrs. S., aged 28; had been married six years. She has had four children; no accident or miscarriage. She has had no sickness other than periodical attacks of pain in the right iliac fossa during each pregnancy. With these attacks there was nausea, but all trouble was attributed to a growing uterus.

Present Illness.—About 5 o'clock on the morning of April 25, 1904, when she was about three months pregnant, she was seized with extremely sharp and colicky pains in the right iliac fossa; this was followed by collapse. Dr. Birmingham was called and advised immediate operation, to which the family would not agree until the afternoon of the same day.

Operation.—In the afternoon, assisted by Drs. Birmingham and Magee, I operated and found a gangrenous appendix surrounded by about two ounces of purulent matter. There was

6. Pinard: Bull. de l'Acad. de med., Feb. 14, 1899.

7. Musser: Am. Med., vol. 1, 1904.

8. French: The Practitioner, London, June, 1904.

9. Goetjes: Münch. med. Wochft.

10. Donoghue: Boston M. and S. Jour., Dec. 6, 1900.

slight evidence of an attempt at walling off. A gauze drain was inserted. The vomiting, which had been present from the beginning, continued, but little distension developed.

Postoperative History.—The temperature remained between 99 and 100, but the pulse gradually increased in frequency. Considerable fecal matter and gas was discharged following enemas. Slight vomiting or rather regurgitation persisted.

On April 29, not satisfied with her condition and influenced by the facial expression, under chloroform, the gauze drain was removed. The omentum was found to be down to the region of the appendix stump; back of this was a loop of intestine greatly distended and containing liquid feces.

The adhesion was freed and the distended loops of the intestine incised, emptied and sewed up with continuous Lembert suture.

As symptoms of ileus persisted, on May 30, at 11 p. m., a Mixer tube was tied into the cecum. A saturated solution of salts was administered, followed by three ounces of alcohol and water.

On June 7, labor pains came on and following manual dilatation a dead fetus was extracted. A fecal fistula persisted for six months and then closed spontaneously.

Pain in the right iliac fossa, which increases as the uterus enlarges and pushes up out of the pelvis, should be looked on with great suspicion. Especially is this true of cases in which abortion comes on, following such pain.

A history of one or more such abortions should suggest surgical interference, even if the physical signs do not point definitely to the appendix.

OVARIAN TUMORS.

Tumors of ovarian or tubal origin are dangerous from their position, obstructing delivery, from torsion of the pedicle in the case of the former, or from inflammation.

A differential diagnosis between ovarian, tubal or uterine tumors, if the tumor is low down in pelvic cavity, is often difficult or impossible.

Extrauterine pregnancy presents such a varied clinical picture that it never can be excluded in making a diagnosis.

The acceptance of the dictum that "neoplasms, wherever situated, should, if possible, be removed, no matter what their apparent nature,"¹¹ would solve most of the difficulties we encounter in endeavoring to make an accurate diagnosis in pelvic conditions before advising operation.

Reposition of a pelvic tumor, with the patient in the knee-chest position, and with or without ether, while not being free from immediate danger, does not, in any way, point toward the removal of the underlying condition, unless the tumor proves to be an incarcerated uterus.

The danger of attempting reposition of an extrauterine pregnancy is sufficiently obvious, while rupture of a cyst and intraperitoneal hemorrhage from ruptured adhesions have been frequently reported.

The danger of torsion of the cyst during manipulation can not be ignored.

If ether is to be given for examination, preparations for operation should be made in case an operative condition is discovered.

While the question of when to operate in the presence of a tumor has been much discussed, there can be no doubt but that operation as soon as diagnosis is made, will yield the best results, unless, indeed, a small tumor, which has given rise to no symptoms, be discovered late in the pregnancy. Even then, the patient should

be carefully watched after delivery to see that torsion, rupture or degeneration of tumor from changed blood supply does not take place.

The most common cause of trouble with ovarian tumors, during pregnancy, is torsion of the pedicle. This may take place at any period of pregnancy, and is accompanied by an increase in size and tenderness over the tumor, while a sharp, stabbing pain is referred to the spot at which the torsion takes place. "This is sometimes accompanied by slight bleeding and bleeding pains."¹²

Under these conditions, prompt removal of the tumor is indicated and is followed by cessation of symptoms referred to the uterus. It will add little, if any, to the maternal danger should miscarriage follow.

Graefe,¹² in a study of 178 cases of ovariectomy, undertaken during pregnancy, found that the mortality of the mothers in the entire list was 2.3 per cent. One of the deaths occurred three months after the intervention, and one death was inevitable, as extensive gangrene was found during the operation. The last 126 operations contain only this one fatality. In 119 cases the pregnancy was interrupted by the intervention in only 19, or 16 per cent. In the last series of 27 abortion followed in 5 and premature delivery in 3. This series includes the American cases of Jarman and Kahn. The pregnancy continued undisturbed in two cases, in which there were numerous adhesions or torsion of the pedicle of the tumor. In the cases in which abortion occurred, there must have been some predisposition to it, possibly from decidual endometritis as the trauma of the intervention was slight. Abortion would probably have occurred without the operation. The statistics show that ovarian tumors, during a pregnancy, induce abortion in 17 per cent. of the patients if left unoperated on. After ovariectomy, the pregnancy was interrupted in only 22.5 per cent., and a third of this number presented urgent invitations for surgical relief. The results of expectant treatment have been a maternal mortality of 39.2 per cent., and a fetal of 67 per cent., according to Orgler's and Winkel's statistics. Six of the cases in the series demonstrate that even after evidences of intending abortion have appeared, prompt ovariectomy will afford relief, and the pregnancy will continue its course uninterrupted.

Heil¹³ adds to Graefe's statistics five new cases personally observed, and others he has collected, bringing the total to 241. He tabulates the later series, and emphasizes the necessity for careful examination of every pregnant woman who complains of pains or other disturbance indicating some irregularity in the genital sphere. If the diagnosis wavers between extrauterine pregnancy and intrauterine pregnancy with an ovarian cyst, a laparotomy is indicated at once. An ovariectomy is by far a lesser evil than the overlooking of an extrauterine pregnancy, especially for a patient who is not under constant medical supervision. He advocates leaving the tube, if possible, when operating during a pregnancy, to avoid traction on the uterus.

In case a tumor is discovered at parturition, obstructing delivery or impacted in the pelvis, the treatment should be Cesarean section, followed by removal of the tumor.

CASE 3.—Dr. R. M. Birmingham, Lawrence, Mass.

Patient.—Mrs. M., aged 29, had been married three years at the time of operation.

11. Richardson: THE JOURNAL A. M. A., Jan. 9, 1904.

12. Graefe: Munch. Med. M. A., Oct. 28, 1902.

13. Heil: Munch. Med. Ma. February, 1904.

History.—She had one other child, no miscarriages. During the first pregnancy she had severe pain from the beginning, and morphin sulphate in doses of gr. 1/12 was given subcutaneously from time to time. After delivery a tumor to the left of the median line was discovered. Some time after this confinement she had severe pain in the abdomen, followed by nausea and vomiting, and went to the Carney Hospital for treatment. Another pregnancy was suspected, and she was sent home with instructions to report later. Eleven weeks after returning from the hospital she had sudden colicky pain in abdomen and increase in the size of the tumor.

She had been uncomfortable for two or three days, and woke early on the morning of April 19, 1904, with a sudden, sharp, severe, stabbing pain in the lower part of the abdomen. She had nausea and vomited once. Her face was drawn. A large movable tumor, the size of a child's head, could be easily outlined in the lower right quadrant of the abdomen. Temperature was 99, pulse 110.

Operation.—Incision was made through the left rectus muscle. A large ovarian cyst, dark and hemorrhagic, from twisting of pedicle, was removed from the left side. A long free appendix containing a concretion was also removed. Recovery from operation was uneventful. The patient was out of bed on the fourteenth day. On Dec. 12, 1904, she was confined in an uneventful labor and delivered of a boy. There was no bulging in the scar and abdominal wall is perfectly solid.

Retarded menstruation, sharp, colicky and abdominal pain, and a growing tumor in the neighborhood of the uterus, strongly suggest extrauterine pregnancy, and that condition should be borne in mind in making an operative diagnosis.

As a positive diagnosis can only be made after the abdomen has been opened, there is little justification for delay.

If, at the operation, an enlarged tube, which does not prove to be impregnated, is found; or a small cyst of the ovary, which may be resected without difficulty, the patient has suffered in no way from the operation. On the other hand, the chance of a serious crisis, if the case be one of extrauterine pregnancy, should far outweigh any objection to surgical interference.

CASE 4.—Patient of Dr. W. G. Brown, Plymouth, Mass., was seen Oct. 5, 1904, at the Jordan Hospital.

Patient.—Mrs. C., ten weeks pregnant.

History.—For eight weeks previously she had had increasing nausea, until nothing solid or liquid was retained. The smell of food caused severe retching with great pain. There had been severe pain in the right iliac region since the nausea began.

Vaginal Examination.—To the right and back of the uterus a tumor the size of a hen's egg could be felt, extremely tender, and causing great pain when pressed on.

Operation.—Assisted by Dr. E. D. Hill of Plymouth, I opened the abdomen and removed a prolapsed cystic left ovary. The uterus was also caught forward by two sutures to the abdominal wall.

Result.—There was good recovery from operation. The nausea and pain were immediately relieved. The patient left the hospital in three weeks, and nothing unusual took place during rest of pregnancy.

On May 24, 1904, after a labor of fourteen hours' duration, she was delivered normally of a male child, weighing 7½ pounds. The labor was in every way normal, and much more comfortable than the former one, the woman having had one child previous to this pregnancy.

FIBROIDS.

When pedunculated, fibroids closely simulate ovarian tumors, and are liable to the same kind of accidents, while subperitoneal or interstitial fibroids may cause trouble in various ways. Change in the tumor itself, or in its relations, and the cardiac, vascular and nephritic

changes which take place with tumor development, all make for early operation, at least during the child-bearing ages.

Dr. Franklin H. Martin,¹⁴ in an analysis of 1,188 cases of operation for fibroids, at the hands of A. Martin, Noble, Cullingworth, Frederick, Scharlieb, and a series reported by Kanner and by McDonald, to which he adds 200 of his own, forcibly shows the difficulty of exact diagnosis and notes the presence of unrecognized, serious complications, diagnosis of which was only possible by operation.

In the 1,388 analyzed cases presented in his paper, the operations revealed 32 cases of carcinoma of the body of the uterus, 24 cases of unsuspected sarcomas of the uterus, 70 cases of necrosed tumors, which were very liable to become infected and to cause death, 53 cases of intraligamentous development of the tumor, which are so liable to produce kidney complications by ureteral pressure, and many other serious symptoms; 8 adenomyomas, 2 pregnancies menacing the life of the patient; 5 ectopic pregnancies, 8 dermoid cysts, 97 suspected or unsuspected true ovarian cysts, 12 parovarian cysts, 72 cases of pyosalpinx, 20 cases of appendicitis, 7 cases of intestinal obstruction, 2 cases of acute intestinal obstruction, 2 cases of obstructed ureters, 2 cases of hydronephrosis from pressure.

In this list these serious conditions, incurable without operation, and unsuspected in the majority of instances, represented 31.6 per cent. of all patients operated on. This is the most instructive and startling thing about this analysis. Nearly one-third of all the cases in which operation was performed were complicated with conditions very liable to prove fatal. This does not take into consideration serious symptoms, the size of the tumors and the various degenerations which are not necessarily fatal, and which are set forth in the same table.

When we take into consideration symptoms, as shown in his 200 cases, we have interesting food for contemplation. Dangerous hemorrhage occurred in 41 cases, or 20.5 per cent.

Whether or not it is antecedent sterility that is the important causative factor in the growth of fibroids, or whether the fibroid condition is the cause of the sterility, the fact remains that fibroids are often found complicating pregnancy. The management of a pregnancy, so complicated, depends on the size and situation of the tumor. This increase in size of the tumor is due simply to its taking part in the hypertrophy common to the uterus.⁹ During pregnancy fibroids almost invariably become flattened.

"The most important or most fortunate change which may take place in the fibroid, irrespective of whether or not it is interstitial, subserous or submucous, is the development of edema with resulting softening."

This allows a subserous tumor, if situated within the pelvis, to slip out past the presenting head, causing the disappearance of apparently hopeless obstruction, and allowing a normal delivery; or it may be compressed into a thinner and broader mass and thus allow the free passage of the child.

After the labor, the fibroid again resumes its prominent shape.

In the great majority of cases, the fibroid in the latter months of pregnancy so changes its location as to

14. N. Y. Med. Jour., June 17, 1905.

leave the pelvic canal free for the passage of the fetus.

Remarkable examples of this are reported in cases in which the tumor filling the whole of the true pelvis has risen spontaneously out of the pelvis and normal labor has occurred.

Hamilton¹⁵ records a very rare case, in which he was called to a woman after labor, in whose uterus the presence of two subperitoneal myomata had already been diagnosed. Dr. Scott had delivered the child and placenta without difficulty, but some twenty hours afterward was sent for in a hurry, on account of the sudden collapse of the patient. He diagnosed intraperitoneal hemorrhage and sent for Dr. Hamilton. The patient was blanched and restless, the abdomen was tympanitic, and an area of dullness had rapidly formed in the right flank.

Abdominal section was performed, and on opening the peritoneal cavity a large quantity of blood escaped. In searching for the source of this bleeding, a ruptured vein of large size was found on the surface of one of the subperitoneal myomata, from which blood was freely escaping. The myoma was enucleated.

Examination showed that a piece of omentum had become adherent to the capsule of one of the tumors. Uterine contractions had probably separated this omental attachment and opened the vein. Good recovery ensued. He mentions that six members of this patient's family had suffered from myomas of the uterus.

Fibroids rarely become necrotic during pregnancy, but cases sometimes occur in which the tumor breaks down in the center, peritoneal adhesions sometimes form and may cause incarceration and abortion.

Dr. Carmalt¹⁶ reports a very interesting case of complicated uterine fibromyoma. Operation was performed and the patient recovered and subsequently became pregnant.

That portion of the history of the case which is of interest in connection with consideration of danger at deliveries follows:

After three miscarriages, the patient became pregnant in May, 1902. By that time it was apparent that there was a large, rapidly growing fibromyoma or myomata, in the anterior wall of the cervix, and lower uterine segment pressing on the bladder, as well as filling the upper vagina so completely that the cervix could not be reached. The patient declined to have labor induced, and we decided to do Cesarean section whenever labor commenced, the period of pregnancy being very doubtful. Preparations were made and labor commenced, but before the arrival of assistants the uterine contractions lifted the tumor out of the pelvis and drove the child down to the perineum. Although this took place in less than half an hour, the length of the vagina was so great that the child was asphyxiated before I delivered it. Faithful, artificial respiration, hot and cold water, and stimulation failed to restore breathing. The patient's convalescence was uninterrupted, and the tumor (apparently the size of a child's head) shrank to less in size than a small egg. (Afterward it grew rapidly.) Oct. 25, 1903, celiotomy performed. The tumor was found occupying the anterior wall of the uterus, encroaching on the bladder below and extending into the left broad ligament. There was no pedicle, myomectomy was performed and the patient recovered and subsequently became pregnant. She was delivered Sept. 15, 1904, of a 10¼-pound boy.

It is the experience of obstetricians that "labor very seldom finds one of these tumors in the way," and this should make us conservative about operation during the

latter months of pregnancy unless symptoms of pressure appear.

Dr. Mixter,¹⁷ in the report of the first case in this country of Porro operation for multiple myomata, in which mother and child were saved, reported the condition of the pelvic outlet as follows:

"Examination showed a solid, immovable mass, filling nearly the whole pelvis. The finger could with difficulty be passed between this and the pubes and a partially dilated os could be felt. This in spite of the fact that the woman, while in labor, had travelled a hundred miles to reach the hospital."

Since the report of this case, a large number of similar cases treated in like manner, have been reported by various operators, and suggest that when a diagnosis of tumor is made, the general practitioner should send for his usual operating consultant rather than for other obstetrical help.

The pedicle of a subserous fibroid occasionally undergoes torsion during pregnancy, followed by peritonitis and interstitial hemorrhage. This gives rise to symptoms which may be obscure and accurate diagnosis may be possible only at operation, as in the following case:

CASE 5.—Dr. A. A. MacKeen, Whitman, on Dec. 5, 1904, was called to New Hampshire to see Mrs. L., aged 34, who had been married the previous June.

History.—She had had persistent nausea and vomiting for three months, and obstinate constipation. She had menstruated last on September 24. She had a violent hemorrhage October 24, lasting only for a few minutes, and followed by intense pain in the lower epigastric region, with great weakness.

Examination.—On examination, Dr. MacKeen found a large mass occupying the posterior portion of the pelvis, immovable or only slightly movable. The os was slightly patulous.

Diagnosis and Treatment.—He formed the opinion that she was probably pregnant and had a fibroid. Possibly an ectopic gestation with early rupture. He had her brought to her home in Whitman. I saw her with Dr. MacKeen on December 10, and performed abdominal section, removing a large pedunculated fibroid from the posterior wall of the uterus. The patient made a good recovery. She was up three weeks after the operation. There was no amount of uterine pain after operation. The constipation was somewhat relieved, and the nausea and vomiting were entirely cured. She had an uneventful confinement on July 4, 1905.

Fibroids present in a uterus after the age of 40 may give rise to symptoms which are sometimes attributed, before operation, to an increase in size or to a change in the character of the uterine growth. Operations have been repeatedly done under these conditions, and a pregnancy found as the basis for the apparent lighting up of the growth.

One case of mine was of this character, and there appears to be no way surely to escape from this error in diagnosis.

On moral grounds, the induction of labor early in pregnancy has no justification whatever. It is fully as serious as the performance of an operation to relieve the condition which complicates the pregnancy, and in the great majority of cases the pregnancy will continue to term.

CONCLUSIONS.

When there is a history of a well-marked attack of appendicitis in a young woman, operation should be performed as an antecedent to marriage.

With well-marked, acute symptoms, referable to the right iliac fossa, in the presence of pregnancy, operate at once.

15. Australian Med. Gaz., April 20, 1904.

16. Am. Jour. of Obstetrics, January, 1905.

17. Mixter: Boston, M. and S. Jour., Nov. 8, 1888.

The same treatment should be applied when there is gradual increase of marked discomfort in the same region.

Operation should be advised, prior to marriage, if tumors of the uterus or appendages are known to be present.

The treatment of ovarian or uterine tumors, not recognized until pregnancy has occurred, should be governed by the conditions existing in the individual case.

At or near term, an operation may be performed which will remove the condition and, at the same time, permit the delivery of the child.

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DISCUSSION.

DR. E. E. MONTGOMERY, Philadelphia, is fully in accord with the conclusions drawn by Dr. Donoghue. There is no question, he said, that the existence of an appendicitis in a pregnant woman is a source of serious danger, and the fact that she has had repeated attacks of chronic appendicitis should be an indication for operation in the early stage of the pregnancy. The danger arising from an operation during the period of quiet would be far less than the patient would incur by continuing the possibility of the development of serious complications during the later stages of pregnancy. Dr. Montgomery has operated on such patients a number of times and the majority of them have done well. One woman had to be operated on during the seventh month of pregnancy. She miscarried, but recovered and has since given birth to two children. He also agreed with Dr. Donoghue in regard to operating on myomata. In many cases one can not tell what changes may take place during pregnancy, and unless the tumor is in the pelvis and interferes greatly with the circulation it is better to wait to see whether Nature is not able to lift the tumor out of the pelvis so as to be out of the way at the time of delivery. The presence of a growth of considerable size in the uterus may be the source of considerable trouble during delivery as the result of irregular contraction. Owing to the increased nutrition in the uterus, these tumors also grow rapidly, and sometimes it becomes necessary to operate in the later stages of a pregnancy on account of the discomfort and the danger of loss of life because of the size of the tumor. In cases in which the patient comes under observation prior to the fourth month of pregnancy and the tumor is of good size and situated in the lower arc of the uterus, it is preferable to open the abdomen and to enucleate the growth. Dr. Montgomery has done this in five patients, all of whom went on to term and were delivered without any unpleasant symptoms; nor did they suffer any discomfort or inconvenience during the convalescence. He also agreed with Dr. Donoghue that when an ovarian tumor complicating pregnancy is below the uterus it is certain to be a source of difficulty in the delivery. It may be possible to evacuate the contents of the tumor through the vagina, but by so doing the patient is subjected to several dangers. Its contents may be of such a character as to give rise to a serious peritonitis complicating the puerperium. It may be of the papilliform variety. If the tumor does not rupture, the pressure to which it is subjected may cause necrosis and the development of serious trouble during the puerperium requiring operative interference and endangering the life of the patient. For these reasons, if the tumor is situated in the pelvis below the developing uterus, the operation should be done as early in the pregnancy as possible. The danger to the patient is less than if we wait to see what Nature will do.

DR. CHARLES S. BACON, Chicago, said that he is particularly interested in the matter of ovarian tumors complicating pregnancy, having had some experience with these cases. He thinks that there is no doubt that all ovarian tumors should be removed as soon as they are diagnosed, with the exceptions made by Dr. Donoghue. The possibility of the rapid growth of the tumor during the pregnancy, which is very common, the danger of pressure symptoms which result from that, and especially the great danger of disturbance of the puerperium, twisting the pedicle and interfering with the circulation, lead

to this conclusion. When the tumor is discovered during labor, however, Dr. Bacon is not certain that the advice to operate at once is best. There is a different condition here, and it would seem that large tumors that fill the pelvis can be replaced fairly easily and safely by making use of the knee-chest position or the Trendelenburg posture, with anesthesia if necessary. The tumor usually can be replaced and labor go on. The case must be watched, and, when symptoms supervene, operation should be done. In fibroids, his experience is against operation, even in the early months of pregnancy. The serious complications in fibroids are not so common as one would expect, and very rarely do they become troublesome during delivery. If the tumor is not situated in the cervix or in the lower uterine zone, he thinks it is best to let it alone.

DR. J. H. CARSTENS, Detroit, said that when he was an obstetrician he met quite a few cases of tumors of various kinds in which the patients died during delivery or shortly afterward, and it always impressed him strongly that these tumors should be removed. When he became an abdominal surgeon, he advocated the removal of these tumors, and some years ago he reported a few cases. An adherent tumor in the cul-de-sac can not be replaced; it must be removed, and as early as possible. A fibroid in the broad ligament growing rapidly, as these generally do, must be removed. A fibroid in the lower segment of the uterus or in the cervix, or at about the situation of the internal os, can often be removed through the vagina by lifting it up completely and enucleating the tumor. Of course, in cases of extrauterine pregnancy and appendicitis there is no question about operating during pregnancy. Strangulated hernias occurring during pregnancy must be operated on. Dr. Carstens had about thirty cases of operations during pregnancy, and he has found that women will stand an operation during pregnancy as well as at any other time. In fact, he believes that they usually stand it better. If the fibroid is down deep, a submucous fibroid, one can not tell beforehand how deep he is going down. The tumor may be over the site of the placenta, and the operator may cause some interference with the circulation of the placenta, producing fatty degeneration, and, as a result, an abortion takes place. Many more women die with tumor during pregnancy and labor than die if operated on promptly. Fibroids that are loose and movable and that are located above the brim of the pelvis, or that are subperitoneal, do not interfere with delivery. The woman will be delivered all right, and the tumor can be removed afterward. Sometimes, during subinvolution, these fibroids will be absorbed, but only in very rare cases.

DR. W. B. DORSETT, St. Louis, emphasized the remarks made by Dr. Carstens, and related a case that occurred in his practice three years ago. A woman consulted him, complaining of much pain in the pelvis. She thought she was about three months' pregnant. On examination Dr. Dorsett found an incarcerated uterus, with a fibroid tumor of conical shape behind the promontory of the sacrum. He recognized that the woman was pregnant and operated. After opening the abdomen he lifted the entire mass, tumor and uterus, out of the pelvis, and on examining the tumor he was satisfied that it dipped down deep into the uterine wall, so he thought it best not to remove it. The woman went on to term and was delivered. The tumor now is not larger than a walnut, so, he thinks, we ought to speak conservatively about enucleation of fibroid tumors during pregnancy, because one can not always tell how deep they dip into the uterine wall. He operated not long ago on a case of ovarian tumor cyst in which pain was severe and that really demanded operation. The case had been deemed one of appendicitis for a number of years. He removed a small cyst from the right side. The woman recovered from the operation, but aborted in the fourth month. Conservatism should guide us in these cases in which fibroids complicate pregnancy.

DR. F. D. DONOGHUE said that surgeons see so many end results of these cases following delivery, especially cases of sloughing fibroids with such a high mortality, that they are apt to be more radical in advising interference than the obstetrician, who only occasionally has a fatal case. Regarding the treatment of the cyst by puncture, in the last seven years

Dr. Donoghue has never punctured an ovarian cyst. Malignant disease of the peritoneum is not uncommon following the puncture of a cyst which may appear benign. The danger of the large incision is much less than the danger of dissemination papilloma of the ovary by puncture.

NERVOUS AND MENTAL MANIFESTATIONS OF PRE-PERNICIOUS ANEMIA.*

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Most practitioners of wide experience have probably been puzzled at times by a class of patients presenting an anomalous grouping of general and nervous symptoms, which have passed from one physician to another; perhaps labelled as "general debility" by one, "neurasthenia" by another, "crankiness" by a third, "hysteria" by others; cases which steadily progress toward a fatal termination in spite of supporting treatment, "rest cures" and optimistic prognoses.

Occasionally a residence for a more or less prolonged period in a well-equipped hospital, or an accidental falling into the hands of some young "up-to-date" village doctor, leads to a routine blood examination and the surprising discovery is made that the patient has "pernicious anemia."

During the past decade it has fallen to my lot to have under observation a number of such patients, whose chief complaints were of a distinctly mental and nervous character, and who in the course of time were found to present the characteristic blood state and somatic phenomena of pernicious anemia.

In some the nervous and mental departures were attributable to preceding or accompanying blood defect; in others, however, distinct evidence of organic nervous changes of degenerative type preceded the actual development of the pernicious feature of the anemia. These latter cases tend to raise again the questions, which have not by any means been satisfactorily answered:

1. Does the impaired enervation at times lead to morbid functioning in the blood-forming or blood-destroying organs?

2. Does the blood deterioration lead to the nervous phenomena?

3. Is there a common cause for the nervous symptoms and the blood deterioration?

It would seem to me probable that the last question will eventually be answered in the affirmative. In a few cases the opportunity has been offered to follow their development from so-called "secondary anemia" to an anemia of "pernicious" type as shown by the blood test.

SYMPTOMATOLOGY.

Analyzed clinically these cases collectively have seemed to present a rather characteristic syndrome, the occurrence of which may be of diagnostic and prognostic import.

In its full development, this syndrome may be characterized as follows, though individual cases may be incomplete as regards one or more symptoms, as would naturally be expected:

1. General ill health.
2. Mental symptoms, viz., loss of inhibition, peevishness and gradual mental deterioration, varied however,

by control, patience, good temper, etc., for longer or shorter intervals.

Two of my cases, both women, presented this variability to a remarkable extent, the mental picture changing abruptly for better or worse within a few hours.

During the "better" periods some patients are almost "angelic" in disposition and conduct.

One patient had a distinct history of auditory hallucinations.

3. Sensory disturbances: (a) Subjective, consisting of intramuscular and articular pains. The former are never, in my experience, of "lightning" character as in tabes, but rather of the nature of "aches" or dull pains.

The articular pains are seldom accompanied by effusions and never by true inflammatory action, heat, redness, etc.

Other subjective sensory complaints which are perhaps more frequent than the above are sensations of numbness, tingling and weight in the extremities, usually more marked in the feet and legs. These symptoms, with the ataxia noted later, have occasionally led to an erroneous diagnosis of tabes, as in Case 1.

(b) Objective sensory disturbances: These are common and consist chiefly of losses of tactile and pain sensibility about the feet and ankles; "patchy" in distribution, i. e., not segmental. Sometimes in the earlier stages only delay in transmission of sensation may be found. Tabes is excluded in these cases by the often exaggerated knee jerks and spastic gait, as well as by the absence of pupillary changes.

4. Plus knee jerks, ankle clonus and "Babinski sign" (extensor plantar reflex) are present in some cases.

5. Ataxia of gait and station is often present.

6. Diarrhea of the mucous type is apt to occur sooner or later.

7. The peculiar "lemon yellow" tint of pernicious anemia occurs in the advanced stages.

A combination of all or a majority of the above symptoms should suggest the possibility of an anemia of pernicious or prepernicious type and a careful blood examination may lead to a correct diagnosis and prognosis.

CASE 1.—Mrs. J. S. M. was seen Sept. 12, 1898. She complained of peculiar feelings in fingers and feet, with stiffness of legs, all of two years' duration.

History.—A diagnosis of locomotor ataxia had been made. This was negated by the entire absence of either Argyl Robinson pupils or lightning pains and the presence of hyperactive knee jerks. The patient's father died of consumption, her mother was epileptic. The patient had been married sixteen years, but had never been pregnant. Syphilis, alcoholism lead and diabetes were excluded in the history. She had been sent south for lung disease in adolescence, with resulting recovery.

Examination.—Woman under average height; general nutrition apparently fair, distinctly anemic to the eye; pulse 96, small; no heart lesion. She was mentally logical, but apprehensive, and was emotionally depressed. There were no cranial nerve palsies or defects; no lightning pains; no defect of pain sense at ankles and feet.

Motor Powers.—Patient can walk fairly well. Her gait is ataxic and slightly spastic. Legs "draw up" at night and knees are tightly flexed when she awakes.

Grasp: R. 45 kilos., L. 32 kilos., by Matthieu dynamometer (estimated at about 60 per cent. of normal). There was some ataxia of hand and arm movements.

Reflexes.—Triceps was superactive and wrist jerks active. Knee jerks were present, slightly exaggerated.

Remarks.—A diagnosis of "probable combined sclerosis" of Putnam-Lichtheim-Dana type was made. Opportunity for blood examination was not obtained, as the patient was going away to a health resort, where she gradually lost strength in

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