A SERIES OF INTERESTING GYNECOLOGIC AND OBSTETRIC CASES.

I.—AN EIGHTY-NINE POUND CYSTIC MYOMA. II.—A LARGE PARASITIC MYOMA. III.—MULTIPLE PERFORATION OF THE UTERUS DUE TO A MACERATED FETUS. IV.—ABDOMINAL PREGNANCY OF FOUR YEARS' DURATION. V.—CHORIOEPITHELIOMA.

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SUCCESSFUL REMOVAL OF AN EIGHTY-NINE-POUND CYSTIC MYOMA INTACT.

As will be noted from the following history, this patient was cognizant of the fact that the tumor had existed for over 20 years. At that time she was under the care of Dr. James Bosley, the present health officer of Baltimore. Further, it will be seen that this large growth did not prevent her from looking after her household duties until recently, and less than three months before the operation she took a 180-mile trip with no ill effects. This, so far as we can learn, is the largest myoma of the uterus that has been successfully removed. The patient is now, eight months after the operation, in perfect health and is gaining rapidly in weight.

CASE I.—Mrs. McA., aged 58, was seen in consultation with Dr. Marshall Smith, June 25, 1906.

History.—Twenty years ago she noticed a tumor in the lower abdomen and later was seen in consultation with Dr. W. T. Howard, emeritus professor of gynecology in the University of Maryland, who at that time advised an operation. Some time after this she was delivered of a healthy child, now 18 years of age. This patient, although suffering from a large abdominal tumor, was able to go around and to do her work until three weeks before I saw her. Her chief inconvenience had been her inability to lie on her back in bed. And sometimes when she would get "stalled," it was necessary for her husband to turn her over quickly, otherwise she would have suffocated. For

two weeks before admission she had a temperature sometimes reaching as high as 103 F. She was admitted to the Church Home and Infirmary July 27, 1906. There was considerable edema of the lower part of the abdomen and some edema of the legs. On admission to the hospital her temperature was 100 F., pulse 105. On the morning of operation the temperature was 100 F., pulse 100, respiration normal.

Fig. 2.—Cross-section of a cystic myoma weighing 89 pounds. The pedicle is clearly seen and in the fresh specimen is not over 1.5 cm. in diameter. Attached to the top over the pedicle are the tube and ovary and near the tube is a piece of liver substance. The tumor has been converted into one large cavity the walls of which consist of muscle. In the walls are numerous cystic spaces particularly well shown at the points indicated by *a*. There are several large cystic dilatations in the wall. The largest is indicated by *b*. The myomatous walls vary from 5 cm. to 1 or 2 mm. in thickness. At the point *c*, where the tumor lay over the vertebral column, the wall is exceedingly thin. The entire inner surface is lined by partly organized blood clots, which give the growth a very shaggy appearance. The entire tumor was filled with blood. The outer surface of the tumor is in many places covered by adhesions containing large vessels.

Fig. 3.—A large parasitic myoma, which weighed 18 pounds and was attached to the uterus by a pedicle 3x.5 cm. At the top is a broad omental adhesion carrying vessels to the tumor. At *b* is a cross-section of a portion of the "rope of omental vessels," which pass down beneath the tumor to *b* and then turn upward again, plunging into the tumor. *a* represents one of the largest vessels, which stand out prominently. Crossing these large vessels are numerous adhesions. *c* is a portion of the large vessel which passed down perfectly free from the omentum to the under surface of the tumor.

Operation. July 30, 1906. Prior to receiving the anesthetic the patient was thoroughly washed and all preparations for operation were made, so that she might remain as short a time as possible under ether. It was impossible for her to lie down, consequently she was operated on in the sitting posture. An incision was made over the most prominent part of the tumor and I attempted to puncture it; the growth, however, started to bleed and no cystic fluid escaped. I continued the incision upward, for the reason that many large veins projected into the tumor from some structure above. The incision was gradually continued upward until the xiphoid was reached (Fig. 1). We found that the large vessels going to the tumor were omental in origin and that they were spread out over the entire upper surface. Some of them were fully 7 or 8 mm. in diameter. The tumor was densely adherent to the anterior and to the lateral abdominal walls. These adhesions were gradually shelled off with the hand, but I had to use the utmost care and do all liberating under sight, as the rupture of one large vein might have caused the loss of the patient's life before the hemorrhage could have been checked. Accessory vessels also passed from the stomach and the liver to the tumor. The

pedicle of the tumor was not more than 1.5 cm. in diameter and was situated directly beneath the ribs. On removal of the tumor I found that I had brought away a piece of liver tissue 3 cm. in diameter. We had no liver needles handy, so I used sharp Hagedorn needles, running the eye through instead of the sharp end. This device answered admirably and the liver bleeding was easily checked by four catgut sutures. The uterus and the right tube and ovary lay under the surface of the liver. Anticipating the possibility of great difficulty in controlling the tumor, we had prior to operation sterilized a large foot-bath and covered it over with a sterile sheet. The foot-bath held about one-third of the tumor and the person who took charge

patient on admission to the hospital weighed 174 pounds. Twenty-three days after operation she weighed 80½ pounds. The condition of the abdomen in this case was particularly interesting. I did not even resect a portion of the abdominal wall, because we had to save as much time as possible during operation. At the first dressing it was noted that the ribs extended out fully 6 inches from the abdomen and that the recti muscles lay on the bed on either side, while there was a good deal of loose and wrinkled skin covering the abdomen. Another interesting point was that the gauze, which drained the extraperitoneal pocket just at the symphysis, now lay in the middle of the abdomen as the tissues were gradually contracting. After the lapse of two weeks the recti muscles could be felt gradually contracting and coming in and the costal arch was flattened down to some extent. When I examined her six weeks after operation the recti muscles were well up in the abdomen, being not over 10 cm. apart. The skin had contracted down wonderfully. The pendulous skin over the symphysis had retracted to a marked extent and the ribs were almost in their normal position. At the time of operation there was a good deal of edema of the abdominal walls. There was also edema of the legs and of the buttocks. Although the utmost care was used, a bedsore developed several days after the operation, there being a black slough over the sacrum 6 cm. in diameter and surrounded by a faint red halo. It had resulted from pressure on the table. The patient had marked edema of the back, but was forced to sit up during almost the entire operation. After she went home she rapidly regained her strength. The bedsore gradually diminished and in time entirely healed. It is astonishing that she had so little inconvenience after the operation.

Description of Tumor.—Miss N. Ellicott, superintendent of nurses, weighed the tumor immediately after its removal; the net weight, after deducting that of the vessel in which it lay, was exactly 89 pounds. The thin part of the tumor lay posteriorly, otherwise we might have evacuated the tumor. Had we done so, however, it would have been much more difficult to have gotten at the large vessels, which we encountered at

Fig. 5.—Pregnant uterus, the fetus and placenta intact. After the uterus had been well hardened the anterior surface was removed. The cervix presents the usual appearance and the uterus is firmly contracted around the fetus. The head lies in the upper portion. The left arm is firmly adherent to the left side of the chest and the skin is macerated to some extent. Situated in the lower part is the placenta which extends slightly over the internal os.

of it was able to guide the tumor in the desired direction without allowing it to slip from his grasp. The tumor was drawn downward and outward and finally delivered from the abdomen. In the lower part it was extraperitoneal. I closed the abdomen, but left a small cigarette drain in the extraperitoneal pouch just over the symphysis.

Postoperative History.—The patient stood the operation well, but was commencing to collapse by the time we finished. She was under ether for one hour and twenty minutes; 200 grams of ether were used. The operation, from the incision to complete closure, took fifty-five minutes; a much longer time would have been consumed had it not been for the combined assistance of both the Johns Hopkins and Church Home staffs. The patient's temperature rose to 102.2 F. within eight hours after operation, but dropped to 100 F. by evening. The highest pulse rate was 130. There was no postoperative vomiting. The legs were bandaged on account of the edema. The patient voided urine on the evening of the day of operation. She was catheterized only once. The usual after-treatment was employed. On the fourteenth day she had considerable discomfort from frequent stools. The diarrhea persisted off and on for a couple of weeks. At this time, however, the weather was excessively hot and diarrhea was general throughout the hospital. It affected chiefly those patients who were somewhat weak. The

Fig. 7.—Chorioepithelioma. The specimen consists of a uniformly enlarged uterus. The cervix is perfectly normal, the body was as large as that of a five months' pregnancy. Occupying the entire body of the uterus is a new growth with many depressions and cystic spaces extending into the wall. The growth itself presents a peculiar porous appearance (b), and the finger-like process so characteristic of carcinoma is absent. In the lower part of the uterus the outer muscular walls are still clearly seen, but in the upper part of the cavity the growth has extended almost to the peritoneal surface. The growth could hardly be mistaken for anything else. It is remarkable to see such a uniform involvement of the entire uterine wall. a Indicates clearly the sharp line of demarcation between the malignant growth and the outer muscular covering.

almost every point. Had this condition persisted much longer the posterior wall of the tumor would certainly have given way and then operation would have been almost out of the question. As it was, the hardened specimen collapsed of itself when placed on the table.

Macroscopic Examination (Gyn. and Path. No. 10382).—The hardened specimen is about 50 cm. in length, 45 cm. in breadth and approximately 25 cm. in thickness. Over the entire anterior surface and laterally are numerous adhesions. Attached to the upper border is an area of omentum 20 cm. in breadth and the hardened vessels range from 5 to 6 mm. in diameter. The pedicle of the tumor is 1.5 cm. in breadth, 1 cm. in thickness and the portion removed is 1.5 cm. in length. Situated just beneath the pedicle and attached to the surface of the ovary is a piece of liver substance 3 by 2 cm. (Fig. 2). On pressure the tumor in part seems to be solid, in part cystic. At operation when I attempted to puncture the tumor, nothing but blood was encountered. The growth is, however, evidently made up of one large cystic space and numerous smaller ones, together with the semi-solid area. Over the part that is cystic the muscle fibers have been greatly stretched and thinned out and there are little hernial projections, the picture being analogous to that found in a slightly sacculated urinary bladder. On section the greater part of the tumor is found to consist of one cavity, which is approximately 42 by 35 cm. The walls vary from 2 mm. to 5 cm. in thickness. Only at one point is the wall very thin, namely, on the under surface where it lay over the vertebral column. The greater part of the wall consists of simple myomatous tissue, but at numerous points small cystic areas are visible and the tissue has undergone the characteristic hyaline transformation. One of the cysts measures 2 by 3 cm. The inner surface is covered with blood and the greater part of the tumor is filled with blood, which has undergone coagulation during the hardening.

Microscopic Examination.—On histologic examination the growth is seen to be made up of typical myomatous tissue. In many areas hyaline transformation has taken place and at some points there is typical liquefaction. The inner surface of the cyst has no epithelial lining; it is covered with blood which is faintly organized.

Dr. Herbert P. Cole, in looking over the literature for me, has found in all about 240 cases of large tumors of the uterus.

The largest authentic successful case found was that of Clarence Webster. The tumor weighed 87 pounds. This was also a cystic myoma and much of the fluid was removed before the tumor was extirpated. Among other successful cases is that of Eastman, in which the tumor weighed 60 pounds.

There are numerous instances of tumors weighing from 40 to 60 pounds. Keith, for example, reported one of 52 pounds, and in Dr. Kelly's service at Johns Hopkins we have had very large ones. Knowsley Thornton reported an instance of a fibrocystic tumor weighing 91 pounds; Tait reported one of 68 pounds, and Stockard one of 135 pounds. Stockard's patient died after tapping. McIntyre of St. Louis operated on a patient with a tumor weighing 93½ pounds. The woman died of peritonitis.

Platonoff saw a patient with a tumor weighing 90 pounds. Two unsuccessful operations were performed and the woman died of gangrene without removal of the tumor.

Hunter speaks of a 140-pound tumor seen at autopsy. Gilliam says that 200-pound tumors have been seen. Such data, however, are hardly reliable unless careful histologic examinations have been made. The tumor in Webster's case weighed just two pounds less than ours. The operation was performed Dec. 16, 1902. There were numerous adhesions, and the entire growth was removed under Schleich's solution and a few drops of chloroform.

Those wishing to get full data on this subject should read the articles by George W. Johnson,¹ G. Piquand,² Joseph T. Johnson,³ McIntyre⁴ and Clarence Webster.⁵

A LARGE PARASITIC MYOMA WITH MARKED DEVELOPMENT
OF THE OMENTAL VESSELS, SOME REACHING
1 CM. IN DIAMETER.

At Johns Hopkins Hospital we have been studying with a great deal of interest the gradual weaning away, as it were, of pedunculated myomata from their parent blood supply in the uterus. As the pedicle becomes smaller the blood supply from the omentum becomes more vigorous until eventually the uterus forms an insignificant source of nourishment and the omentum, as in this case, sends in very large vessels. I have studied a large series of such cases, which will be published by Dr. Kelly and myself at a later date. In the more advanced cases the omental fat disappears completely and the vessels lie just between two peritoneal folds. In this case the cord of omental vessels forming a rope 6 cm. in diameter seems almost unique.

CASE 2.—C., a colored patient of Dr. Scheller, of Hagerstown, was admitted to the Hagerstown Hospital, Aug. 4, 1906. She had had an abdominal tumor for five years. The tumor rose abruptly and projected fully 18 inches from the general abdominal contour. The vagina posteriorly was greatly encroached on.

Operation.—On opening the abdomen a tumor was encountered which was adherent everywhere to the anterior abdominal wall and also laterally. Running into the anterior surface of the tumor from its upper end were blood vessels, some of them nearly 1 cm. in diameter. They were spread out over an area 16 cm. in breadth. Passing down the right side of the tumor and lying beneath it was a regular rope of blood vessels (Fig. 3). These lay perfectly free from the surrounding structures, could be lifted up, were covered with peritoneum and were evidently omental; but no fat was present. These vessels formed a mass 6 cm. in diameter and looked and felt like small masses of snakes. They could be traced down to the lower end of the tumor, where they spread out over its surface and plunged into its substance. One of the vessels, 5 mm. in diameter, passed down by itself and lay absolutely free. It was isolated for a distance of 18 cm., being devoid of any attachment whatever. It originated in the omentum and extended downward and plunged into the tumor. After liberating the vascular supply we found that the tumor was attached to a small myomatous uterus. The pedicle was 3 cm. in breadth, 5 mm. in thickness and contained but one blood vessel of any size. The pedicle was cut and the tumor delivered. In the vessels passing from the omentum we encountered, as a rule, one artery and two veins. The artery was about one-third the size of a vein. As the patient's condition became rather serious, although she had not lost more than two ounces of blood, we ceased the operation, the patient still retaining her myomatous uterus and a second myoma fully 25 cm. across. This also had vessels from the omentum plunging into its upper part and was attached to the uterus by a pedicle 2 cm. in diameter. As soon as the patient regains her strength thoroughly I hope to remove the uterus and the large parasitic myoma.

Result.—The patient made a satisfactory recovery and left the hospital about six weeks after her admission.

Description of Specimen.—On examination of the hardened specimen, it is found to be 23 cm. in length, 25 cm. in breadth and 20 cm. in its anteroposterior diameter. It is markedly nodular, exceedingly hard and weighs 18 pounds. The upper omental attachment still clinging to the tumor is 15 cm. in width and 8 cm. in length. The omental attachment that ran down

1. Johnson (G. W.): Collected Cases of Fibromata of the Uterus with Tables. Amer. Jour. Obst., 1335, 1272.

2. Piquand (G.): Les Tumeurs Fibro-Kystiques de L'Uterus. Rev. de Chir., 1906, xxxiii, 462.

3. Johnson (Joseph T.): Amer. Jour. Obst., December, 1891, 1420.

4. McIntyre: THE JOURNAL A. M. A., 1891, xvii, 13.

5. Webster (Clarence): Jour. Obst. and Gyn., Brit. Empire, August, 1903, 135.

the side of the tumor consists almost entirely of blood vessels. Its attachment at the lower border is 20 cm. broad. Even in the hardened state some of the blood vessels are nearly 1 cm. in diameter.

DEATH OF FETUS WITH SUPPURATION; PERFORATION OF UTERINE WALLS; SUPRAVAGINAL HYSTERECTOMY; RECOVERY.

This case demonstrates how Nature, if left alone, may successfully ward off an attack of general peritonitis. Here there was suppuration in the uterine cavity, numerous perforations of the uterus—fortunately situated entirely in the anterior wall—and then successful walling off by the abdominal wall becoming adherent to the uterus.

CASE 3.—A. P., colored, aged 21, was admitted to the Cambridge Hospital, March 4, 1906. The patient had been thought to be pregnant one year before. She had been carefully watched for some time, but no further developments had taken place. She had had some slight fever. Nothing more definite could be learned, however. When I examined her the cervix was soft; the uterus was globular and lay half way between the umbilicus and the xiphoid. The growth was apparently somewhat movable.

Operation.—I made an incision over the growth and immediately came in contact with what looked like grumous material, which suggested a suppurating ovarian cyst. As the tissues were densely adherent, I continued the incision upward

Fig. 1.—Tremendous abdominal enlargement due to a cystic myoma. The abdomen is markedly and uniformly distended and the growth extends down almost to the knees. It will be noted that there is no sagging in the flanks. Coursing over the surface were very large vessels. When it is realized that the abdominal incision extended from the xiphoid cartilage down over the entire length of the tumor and then back to the symphysis it is readily seen that the incision was nearly 4 feet in length.

and opened up the general peritoneal cavity. On loosening the other adhesions I found the omentum adherent. This was clamped and cut. The tumor was intimately blended with the thickened abdominal peritoneum. It was shelled out as rapidly as possible, but pus oozed from the surface in various directions (Fig. 4). I thought that I was dealing with an ovarian cyst, but was surprised to find on releasing it from the adhesions that it was the enlarged and globular uterus. I amputated through the cervix. The tubes and ovaries were covered by a few slight adhesions, but were otherwise normal and were left behind. It was with the greatest difficulty that enough peritoneum was obtained to close the abdomen, as so many raw areas had been left where the uterus had been adherent to the abdominal wall. A gauze drain was introduced into the lower part of the incision. The patient improved rapidly and left the hospital feeling perfectly well.

Description of the Uterus (Gyn. and Path. No. 9810).—The specimen consisted of an irregular and globular mass approximately 18x17x15 cm. in diameter. Its surface was everywhere covered by adhesions, and at numerous points were openings irregular in shape and varying from 3 mm. to 5 mm. or more

in diameter. Through these openings quantities of pus welled out during the operation. The pedicle or cut surface was 4 cm. in breadth, 3 cm. across and in the central portion of this was what looked like the cervical canal. On opening the specimen after it had been hardened we found that this tumor was the uterus (Fig. 5). The walls varied from 1.5 mm. to 4 mm. in thickness.

Fetus: Snugly filling the entire cavity was a fetus (Fig 5). The length of this fetus from elbow to axilla was 7 cm., from elbow to shoulder 8 cm. The breadth of the fetus in the axillary line was 13 cm. Other measurements could not be made on account of the distortion of the child, but it appeared to be an eight-month fetus. The skin was somewhat macerated. The child had evidently been a mulatto, as in many places the mottled appearance was still present. At other points, however, the outer skin had been rubbed off and the surface had the pale appearance of a white child. The hair which was matted up against the uterine wall was curly and black and several centimeters in length.

Placenta: The placenta occupied the lower quadrant of the uterus and projected over the cervix; there had been a partial

Fig. 4.—The perforated pregnant uterus as seen on removal. It is everywhere rough and covered by adhesions. In the lower part of the field is seen the stump of one tube. At points *a, a* are perforations of the uterus, whence pus was seen oozing out; at *b, b* the walls are exceedingly thin, there have been many adhesions and pus is lying on the surface. One would not for a moment take this to be the uterus except for the presence of the tube.

placenta prævia. The placenta at the thickest portion was 2 cm in thickness. Attached to the surface of the child, especially in the vicinity of the hair, was much friable, yellowish material. This looked very much like inspissated pus. It was from the surface of the uterus at points of perforation that the purulent discharge came during the operation.

Sections of Uterine Wall: Sections from the uterine wall showed that the outer surface, at certain points, particularly where it was adherent to the abdominal wall, was covered by numerous adhesions. On the protected side cuboidal cells were visible. The muscle at such areas showed a great deal of small round celled infiltration. The inner lining of the uterus was much altered. There was a good deal of canalized fibrin and also regular ribbons of hyaline and canalized fibrin. Just beneath the surface and on both sides of this were numerous small round cells and polymorphonuclear leucocytes. At a few points calcified villi could be made out. Decidual cells were still in evidence, but they had become smaller.

Remarks.—There had evidently been a chronic inflammation of the inner surface of the uterus coupled with an inflammatory process on the outer surface at the points where the uterus was

adherent to the abdominal wall. In this case there had been death of the fetus for some cause or other and discharge or absorption of the liquor amnii. Suppuration had taken place in the uterine cavity. At some points the uterine walls had become perforated and the pus had trickled out over the surface. Fortunately, no intestines lay in the way and the pus had glued the uterus to the anterior abdominal wall. This is certainly one of the rarest conditions to be met in the literature.

ABDOMINAL PREGNANCY OF FOUR YEARS' DURATION;
OPERATION; RECOVERY.

In this case there was a typical history of a pregnancy going on apparently to term. Labor pains developed and soon ceased and the patient retained a tumor for between three and four years without any marked discomfort. It is certainly remarkable that this abdominal tumor persisted so long without giving rise to any alarming symptoms. The nourishment of the abdominal pregnancy was, of course to a great extent furnished by the omentum.

Fig. 6.—Abdominal pregnancy of four years' duration.—The illustration is an exact reproduction of the abdominal contents and has been drawn from the specimen. The uterus is normal in size, normal in position. Attached to its right side is a large pus tube which is densely adherent to the sac. On the left side the structures are not clearly outlined, as the broad ligament was intimately attached to the pregnant sac. Passing over the anterior surface of the sac in its upper portion, and considerably flattened, is the transverse colon. Densely matted to the surface of the sac is the omentum. In the upper part of the sac a window has been cut out and to the left a hand, at the top a foot, and between these two and lying in the vicinity numerous tufts of hair represented in black may be seen. The sac passes down and almost completely fills Douglas' pouch. This tumor had lain in the abdomen nearly four years. Apart from the adhesions to the transverse colon the intestines were perfectly free.

CASE 4, Gyn. No. 13272.—J. A., colored, married, aged 28, was admitted to the Johns Hopkins Hospital from the dispensary, Sept. 27, 1906.

History.—She complained of pain and swelling in the abdomen. Her general health had always been good and she had never consulted a physician before. Her menstrual history was unimportant. She had been married fifteen years and had

had four children, the eldest nearly 15 years old. The second child was deficient mentally but lived five years. The third was 10 years and the youngest 8 years of age. Her labors had all been normal; there had never been any miscarriages. For some years she had had a slight amount of thick, white, foul-smelling discharge, more marked before and after her menstrual periods than at any other time. For several years she had been constipated, the bowels not moving for two or three days at a time. She had passed no blood nor mucus.

Present Illness.—About four years ago she noticed a small lump in the lower part of the abdomen. This was the size of a baseball situated below and to the left of the umbilicus. The tumor increased in size at a uniform rate and the patient thought she was pregnant. At the end of nine months the tumor reached above the umbilicus. The breasts were enlarged and contained colostrum. The patient had had no nausea or vomiting. Her menstrual periods had been regular, although she had had a very scanty flow. She was certain that she had felt movements of the child. About the time that labor should have come on she had bearing-down pains beginning in the evening and lasting until early morning. The pains ceased then and never returned. The patient thinks that she has never had any other signs or symptoms since that night. The breasts gradually became soft and dried up. The tumor seemed to decrease slightly in size. No movements were felt and the patient suffered no discomfort. She became convinced that she had a tumor.

Symptoms: Until about a year ago she could go about her work without difficulty, but then she began to notice a little soreness and the "tumor began bothering her."

Within the few months previous to admission she had felt an increase in the amount of soreness. She had had headaches at times, her tongue had been coated, she had frequently felt nauseated but had not vomited. After walking a good deal there was a burning sensation in the lower part of the abdomen, and during the last two months the headaches had been quite severe. The patient had to stop work on account of the burning pain that would come and go. This pain was eased by lying down. She slept well, but her appetite was poor and she said she did not gain in weight. There was no pain nor burning on defecation or urination.

Examination.—Dr. Hutchins, the resident gynecologist, found the patient rather emaciated. The abdomen was distended rather more on the left than the right side by a tumor which rose from the pelvis and reached 4 cm. above the umbilicus in the median line. The tumor felt cystic; it was movable, dull everywhere on percussion and no fluid wave was noted. On vaginal examination no evidence of infection could be found. The cervix was firm. There was slight bilateral laceration. The uterus was in anteposition, normal in size and apparently in no way connected with the abdominal tumor. Movement of the tumor did not draw the cervix upward. Clinically, the tumor was thought to be an ovarian cyst or a myoma, but no definite diagnosis could be made.

Operation.—Sept. 28, 1906. After making a long abdominal incision it was found that the abdominal cavity was occupied by a large "tumor of the left ovary," to which were adherent the omentum, the entire transverse colon, a portion of the sigmoid, and the ascending colon. The uterus was densely adherent to the right side. The omentum was tied and cut, a portion being left attached to the tumor, the proximal portion being reflected backward with the transverse colon. In doing this the thin wall of the tumor was ruptured and an ounce or two of thick creamy, yellowish material escaped. This was rapidly sponged up, and further escape controlled by pressure with gauze. In order to avoid infection, so far as possible, the right tube which had been converted into a pus sac and was adherent to the cystic tumor was liberated. The broad ligament on the left side was clamped and cut so that the tumor could be shelled out of the pelvis and tipped over to the left side. In this way the grumous contents of the cyst were prevented to a great extent from escaping into the abdominal cavity. After the tumor was shelled out there was a great deal of bleeding from the mesocolon. This bleeding was checked as far as possible by sutures and the transverse colon was then curved in on itself, so that the mesocolon formed a funnel. A gauze drain

was introduced into this as it dropped down on the pelvic brim and was brought through the vagina. In this way we were able to check the bleeding almost completely. The abdomen was closed without drainage from above.

Result.—The patient made a very satisfactory recovery and was discharged Oct. 21, 1906.

Description of Tumor (Gyn. and Path. No. 10417).—The specimen consists of an abdominal tumor which was connected with the left broad ligament and the left tube and ovary. It was absolutely free from the uterus, which was not removed. The specimen in the hardened state measures 24 cm. in length, 18 cm. in breadth and 16 cm. in its anteroposterior diameters (Fig. 6). Attached to its right side are the right pus tube and the right ovary. To its left are the tube and ovary, which are plastered down on it. Covering almost the entire upper surface of the tumor is omentum, which is densely adherent to the mass and furnishes a large part of its blood supply. The walls of this tumor vary from the thickness of paper to two or three millimeters. From this tumor grumous material, like fat mixed with pus, escapes and at several points hair can be seen. On cutting a window out (Fig. 6) the interior is found to be filled with a fetus, which is of at least seven or eight months' growth. On account of the distorted condition it is difficult to get the exact age, but the sole of the foot measures 6.5 cm. in length and looks mature. The other parts are correspondingly large. The hair of the child is black and curly. There are several points where slight ulceration of the surface has taken place. These points correspond to the very thin areas noted in the outer covering. The right tube, which was so firmly glued down that it was thought necessary to remove it, in the hardened state, measures 10 cm. in length. It is entirely covered by adhesions, and at its fimbriated end reaches 2.5 cm. in diameter. The ovary is also covered by adhesions, but is not enlarged.

The left ovary is very much flattened and covered by adhesions. The tube runs over into the tumor mass and is lost. It is flattened out and at one point measures .8 cm. in diameter. The placenta is attached to the left side of the mass.

Histologic Examination.—The sac enclosing the fetus shows that where the omentum has been adherent it has been transformed almost entirely into new and old connective tissue; even the outer adhesions which contain islands of adipose tissue are for the most part made up of dense fibrous tissue. Passing inward the fibrous tissue looks older and then hyaline areas are seen which in size and form closely resemble placental villi. Between these are many small round cells and spindle cells. The inner portion is composed of similar hyaline areas surrounded by a zone of brown pigment that has evidently resulted from an old hemorrhage. The inner surface is lined by necrotic tissue which is especially rich in canalized fibrin, containing chiefly polymorphonuclear leucocytes. In no place is there evidence of muscle fibers and it looks as if the case was one of an abdominal pregnancy in which the sac, which was partly supported by the omentum, had gone on to new connective tissue formation.

Remarks.—As noted in the description of the operation the uterus was in no way implicated in this growth. It was situated in the center of the abdomen and gave no signs of being half of a bicornuate uterus.

Diagnosis.—Abdominal pregnancy of 4 years' standing, supuration of the sac, dense omental adhesions.

CHORIOEPITHELIOMA WITH THE UTERUS THE SIZE OF THAT OF A FIVE MONTHS' PREGNANCY; HYSTERECTOMY; APPARENT RECOVERY.

This disease, although by no means rare, is not very common. From Baltimore only two cases have been reported. In 1895 J. Whitridge Williams,⁶ under the title "Deciduoma Malignum" reported a case occurring in the University of Maryland Hospital; and in the last edition of Kelly's "Operative Gynecology" a case is cited from the Gynecological Department of the Johns Hopkins Hospital. Thus at the Johns Hopkins Hospital only two cases have been encountered in 17 years.

By a fortunate coincidence on the morning on which I operated on the patient whose history is here given, Dr. Cuthbert Lockyer of London, England—the man who has worked so much on this subject in Great Britain—was present. Even from the macroscopic examination the gross appearance was so characteristic of the placental growth that both of us at once said "chorioepithelioma." In this case the decidual-like cells, those supposed to originate from Langhan's layer, predominated, but in some places the large sinuses, the brown-staining protoplasm and the characteristic vacuoles were in evidence. The specimen is particularly interesting on account of the uniformity of the distribution of the growth throughout the entire uterine body.

CASE 5, Gyn. No. 13204.—The patient was admitted to the Johns Hopkins Hospital on Aug. 31, 1906, and was discharged on Sept. 25, 1906.

Examination.—She was not very well nourished. The mucous membranes were of a fairly good color. There was no glandular enlargement. The heart and lungs were normal. On examination Dr. Rushmore found the abdomen somewhat distended by a firm mass which rose out of the pelvis and extended as high as the umbilicus, rather more prominently on the left than on the right side. The mass was slightly movable and not tender except just above Poupart's ligament on the left side. It was regular in outline and on deep inspiration its upper border was obliterated by the surrounding intestines. The vaginal outlet was moderately relaxed, the cervix was high in the vaginal vault, lying far back and pointing downward. The cervical lips were not hypertrophied; the os was slightly patulous. There was no induration suggestive of new growth. The mass in the pelvis was uniformly fixed. On examination, under ether, the tumor seemed to be freely movable, but resembled a fibroid about 6 inches in diameter with a cystic mass on the left. The breasts contained colostrum.

Operation.—September 3: On exposure of the enlarged uterus the appearance suggested pregnancy very strongly. The vessels were much dilated. No definite nodules could be made out in the fundus, but on the posterior surface was a slight prominence, with a curious yellowish discoloration of the tissue beneath, and there were numerous dilated blood vessels suggestive of a malignant new growth. As a definite diagnosis could not be made from palpation we decided to incise the uterus over the prominence, at the same time carefully walling it off, so that there would be no danger of infection and the general cavity would be protected. On incision a vascular new growth was immediately seen. This had a spongy appearance and immediately suggested a malignant growth differing entirely from carcinoma and in no way resembling sarcoma. The incision was immediately closed with silk and the uterus removed. A vaginal drain was inserted in the lower angle of the abdominal wound in order to drain down to the peritoneum. The liver was carefully examined for metastases, but none could be detected.

Result.—The patient was examined on September 24, prior to her discharge. The abdominal incision was well healed; neither induration nor tenderness could be made out in the vaginal vault. Dr. Holland, writing me on Oct. 29, 1906, says: "I received a letter from her two days ago. She was able to be about the house, is cheerful, and is gaining in strength. She still complains of pain in the right arm which developed when she was in the hospital."

Remarks.—In this case there was no positive history of a recent miscarriage, although the possibility can not be excluded. The contour of the uterus on pelvic examination strongly suggested a myomatous uterus and with the abdomen opened it was impossible for one to exclude the possibility of pregnancy.

Description of the Tumor (Gyn. and Path. No. 10278).—The specimen consists of a greatly and uniformly enlarged uterus measuring 20 cm. in length, 13 cm. in breadth and 12 cm. in thickness. The anterior surface is smooth and glistening; the posterior is covered by many adhesions, thin and fan-like. Attached near the left cornu is a tag of omentum. On section the uterine cavity is found to be 15.5 cm. in length.

6. Johns Hopkins Hosp. Rep., vol. iv, 1895.

The uterine walls vary from 3 to 6 cm. in thickness. The outer portion of the wall consists of muscle varying from 1 to 1.5 cm. in thickness. Lining the entire uterine cavity is a spongy, porous growth. The uterine mucosa as such is not recognized, but is represented by hills and hollows. The projections into the cavity are dome-shaped and vary from .5 to 2 cm. in depth. Here and there on the surface are cystlike depressions with narrowed bands of tissue stretching from side to side. There are also numerous cavernous spaces bridged over by bands of the growth. This growth involves the entire uterine wall, both anteriorly and posteriorly. The great thickening in the wall is due to the presence of the growth, which varies from 1 to 6 cm. in thickness. At the fundus it extends almost to the peritoneal covering. The growth in no way resembles a carcinoma, nor is there any appearance suggestive of a sarcoma. One is instantly reminded of the growths that occasionally occur after a miscarriage. The cervix is somewhat flattened, is 6 cm. in breadth, and its lips appear to be normal (Fig. 7).

Microscopic Examination.—Sections from the cervix show little alteration save for the fact that many of the glands are small and round, and that they appear to be somewhat dilated. Here and there they extend for some distance into the muscle. They do not, however, show the slightest evidence of any active process. The tissue lining the cavity has undergone almost complete necrosis. It is still represented, however, by a great deal of canalized fibrin containing polynuclear leucocytes, and here and there, especially in the vicinity of the large blood vessels, are areas where the cells are still preserved. These consist of large discrete cells containing small vesicular nuclei, nuclei of moderate size that have stained deeply, and still larger nuclei containing vacuoles and great masses of protoplasm staining very deeply. The protoplasm of many of the cells contains vacuoles or clear spaces. In the deeper portion, that is, in the vicinity of the muscle, there are large blood sinuses, and lining these are cells closely resembling decidual cells. They have for the most part vesicular nuclei, which vary considerably in size from very small ones to others very large and lobulated. Scattered throughout this decidual-like tissue are numerous vacuoles. In the vicinity is much canalized fibrin with isolated cells of a smaller character scattered throughout it. The protoplasm of these so-called decidual cells, wherever situated, is of a brownish tinge. At numerous points are isolated masses of these decidual-like cells lying perfectly free in the blood, thus showing that they are either isolated and free masses or finger-like projections cut across. In some places are large plaques of protoplasm containing six or more nuclei, and in the immediate vicinity the canalized fibrin contains collections of polymorphonuclear leucocytes. At a few points are elongated, very deeply staining masses of chromatin lying free in hyaline material. The line of demarcation between the muscle and the new growth is at some points sharply defined, but in numerous places the cells of the new growth are wandering in and completely overwhelming the muscle fibers. In the advancing margins there is a certain amount of small round-celled infiltration, and in the corresponding deeper portions there is a great tendency for the growth to undergo coagulation necrosis. This is undoubtedly a chorioepithelioma, but one in which no placenta villi are demonstrable.

Remarks.—The contour and general form of this growth before the uterus was opened corresponded almost identically with those of a myomatous uterus. There was on the left side a slightly nodular elevation which was most suggestive of myoma. Curettings, of course, in this case would have yielded nothing but necrotic tissue, but this should immediately have put us on our guard. Such a finding would exclude myoma and would also tend to rule out adenocarcinoma, as in an adenocarcinoma such extensive areas of coagulated necrosis are rarely to be found.

Histologic Examination of Scrapings Four Months Before Admission to Hospital.—These scrapings were made by Dr. Holland and fortunately had been put aside and were examined after the removal of the uterus. It will be seen that although there are a few suspicious changes no positive diagnosis could have been made.

Gyn. and Path. 10275. The greater part of the tissue is entirely necrotic; it takes the eosin stain, or when the hematoxylin is noted the cells are very cloudy. In some places there are shadows of very large nuclei and here and there the nuclei are still perfectly preserved. These, however, are elongated, some of them are irregular and stain deeply. The picture is not one that would enable a pathologist to make a satisfactory diagnosis. There are, however, islands that strongly suggest sarcoma or that, considered in conjunction with the history, suggest a malignant placental growth. The section is one that would certainly call for further examination.

THE PREFERABLE METHOD OF ANTERIOR FIXATION OF THE UTERUS WHEN THE ABDOMEN IS OPEN.

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(Continued from page 1490.)

affecting a decided change in the direction of traction. The operation has the disadvantage that it requires extensive dissection and handling of tissues deep in the abdominal wall.

Of the various methods of utilizing the round ligaments after the abdomen is open, the one I have found most useful is practically the Gilliam-Ferguson operation. Instead of following the usual technic, however, I find that the work can be more conveniently and expeditiously executed by passing a puncturing tenaculum forceps (Fig. 1) through the wall, grasping the ligament directly and bringing it out along the forceps track. The exact technic preferred for the class of cases under consideration is shown in detail in the following steps:

1. The special work for which the abdominal cavity was opened having been completed, the left round ligament is grasped with an ordinary tenaculum forceps about 1½ inches from the uterus. The right ligament is caught in a similar manner with another forceps and then any retractors that are in the way are removed from the abdominal wall. The grasping of the ligament of each side with the tenaculum forceps facilitates the subsequent manipulation of the ligaments, after the removal of the retractors which expose the pelvic cavity.

2. The point of the puncturing tenaculum forceps is entered in the left side of the wound just beneath the upper sheath of the rectus muscle and about one inch above the pubic bone. It is passed outward just beneath the sheath for an inch and then the point is directed downward and made to puncture the rectus muscle and posterior sheath, but not the peritoneum. Guided by the fingers in the abdomen, it is then passed outward between the peritoneum and the aponeurosis to a point about one inch from the internal inguinal ring, where it is made to penetrate the peritoneum. The handle of the instrument is then raised so as to direct the point toward the round ligament and is made to grasp the ligament and peritoneum 1½ inches from the uterus (Fig. 2).

In the class of cases under consideration, the ligament and peritoneum are usually so stretched and lax that they are easily drawn into the new canal as a small cord. If the ligament is unusually thick or if the peritoneum is so thickened that it probably will not pass easily into the forceps canal, a window may be snipped in the peritoneum in front of the ligament and the ligament alone grasped and brought into the canal.

3. The forceps is then withdrawn, bringing the ligament with it into the forceps track and out at the ab-