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CONCEALED PREGNANCY:

2.

ITS RELATIONS TO

ABDOMINAL SURGERY

BY

ALBERT VANDER VEER, M.D.,

Prof. of Didactic, Abdominal, and Clinical Surgery in the Albany Medical College; Fellow of the British Gynecological Society; Fellow of the American Association of Obstetricians and Gynecologists; Corresponding Member of the Boston Gynecological Society, etc.

Read in the Section on Obstetrics and Diseases of Women and Children, American Medical Association, Newport, June, 1889.

[Reprinted from the AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, November, 1889.]

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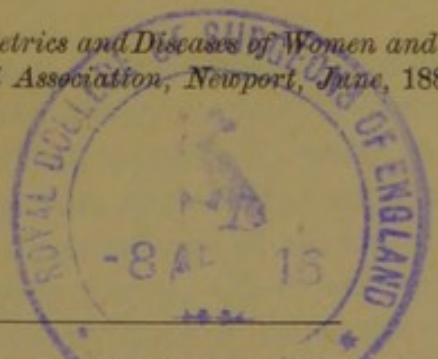

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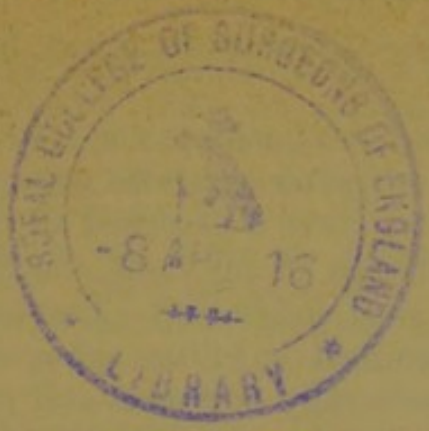

CONCEALED PREGNANCY:

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ABDOMINAL SURGERY.

A HALF-CENTURY ago a distinguished German surgeon was called in consultation by a very competent obstetrician to a case in which the patient had apparently been in labor for three weeks. A Cesarean section was decided upon, and the abdomen opened, when, to the discomfiture of all, nothing but intestines distended with gas were found. That the professor was chagrined and in a vindictive frame of mind was demonstrated by the after-treatment, for he kept the abdomen packed with ice and applied two hundred leeches to the abdominal walls, and, in addition, subjected her to three bleedings. The patient recovered, and doubtless ever after desisted from trifling with the resources of surgery. This case has never been reported as a successful Cesarean section. From then until now errors relative to the diagnosis of pregnancy as a complication of abdominal section have occurred, and doubtless will continue to occur. No one has been free from the liability to this error. The most eminent and painstaking surgeon of extensive observation,

as well as the operator of few opportunities, have alike the same experience.

When mine came I must confess that I felt not a little humiliated. I asked myself, after a careful review of my notes and those of my assistant, Have I exercised all the care that is possible in the examination of my cases, and have my diagnoses been based upon good judgment? Text-books on obstetrics and gynecology furnished but little aid or comfort. The few cases reported were widely scattered, and many found in the tables accompanying this paper were secured only after diligent personal inquiry. Many of the moot questions of abdominal surgery have already been settled, and we are little benefited by papers devoted to the treatment of the pedicle, drainage, or the detailed histories of cases. I have thought that I might be able to contribute something for the benefit of the profession by giving the results of my investigations on this subject. I shall relate the histories of two personal cases of exploratory incision in which pregnancy as a complication of fibroid tumor occurred, and which was not diagnosticated prior to the operation, either by myself or my colleagues, after repeated careful examinations.

I purpose treating the subject with perfect frankness. I have collected all reported cases wherein the same conditions existed, and personal inquiry has secured the histories of many others which are now presented for the first time. That the tables are incomplete I know, for some operators have either perverted the histories of their cases or have suppressed them altogether. This latter statement is capable of abundant proof. We shall later, when we come to the consideration of the table of cases, collect such facts as seem warranted from the clinical histories, and endeavor to draw from them such conclusions as are justifiable.

CASE I.—*Abdominal Section, Exploratory. Operator, A. Vander Veer. Operation October 7th,* 1887.

Mrs. E. C. W., aged 34, native of U. S., married, and by occupation a housewife. Family history decidedly tubercular. Patient gave history of past ill health; but, aside from an expression indicative of much pain and suffering, she seemed physically strong. First menstruation at 13, scanty and painful; menstruation always irregular, and has suffered for extended periods from amenorrhea. No children, no miscarriages. Was treated during 1883 for ulceration of the cervix with leucorrhea. June 5th,

1887, was the date for the return of her menstruation, but no flow appeared, and June 25th, 1887, she noticed a tumor in left iliac region, which grew rapidly and became very painful. Patient had a slight show July 4th; also noticed slight tingling and swelling in the breasts; no nausea or vomiting. I gave her a careful examination at my office, and made the following notes: Breasts slightly enlarged and tender, areola not marked by pigments, abdomen to the height of the umbilicus irregularly distended. Palpation revealed a hard tumor on the left side and a softer one (semi-fluctuant) on the right side. No absolute signs of pregnancy after repeated examinations. Per vaginam a natural cervix could be felt high up, and a mass at the left of the uterus distinctly made out. I was in much doubt as to her condition, taking into full consideration the probability of a normal or extra-uterine gestation, also of fibroid or fibro-cystic tumor of the uterus. I advised that she enter the Albany Hospital for further observation, which she did a few days later. Upon examination and consultation by Drs. Boyd, Townsend, and myself, having agreed upon the physical signs already detailed, and having introduced a sound into the uterus three inches without result, in view of the distress and great pain of the patient an exploration was deemed advisable. A full explanation was made to the family, an operation advised and consented to by them, having in view the great probability of an ectopic gestation. Abdominal incision revealed two fibroids upon the left of the uterus, subperitoneal in character, and the remainder of the uterine tissue, especially upon the right side, seemed involved by multiple myxomata of a softer consistence. Adhesions were very general, precluding its removal. No further operation being advisable, abdomen was closed. Patient went on well until the fifth day, when localized peritonitis developed and rapidly became general. On evening of sixth day, abdominal wound opened in consequence of great distention of the bowels, due, in part, to peritonitis and obstructive pressure of fibroids. A large dressing was saturated with serous effusion. Wound was brought together by strapping. Next morning drainage was introduced, peritonitis subsided in a day or two, and case went on to recovery. Discharged from hospital November 8th, 1887, abdominal wound completely healed. November 13th I visited her at a friend's home, and found her presenting a very good condition of health and able to move about the house. Advised the use of electricity, and requested her to let me know later on how she progressed.

December 24th, Dr. H. F. C. Muller, of Rensselaerville, who had originally referred the patient, visited me and stated that he had been called to attend Mrs. W. a few days previous. Arriving at her house, he found her partially delivered of a six months' fetus. The doctor delivered the placenta, noticing quite an enlargement of the abdomen remaining. Patient recovered from her abortion slowly, and since I have had no opportunity for an examination.

CASE II.—*Abdominal Section, Exploratory. Operator, A. Vander Veer. Operation May 11th*, 1888.

Mrs. M. M. S., aged 35, native of U. S., and by occupation a housewife. Family history excellent, and before puberty enjoyed good health. First menstruation at 14, always regular, but suffered from dysmenorrhea and menorrhagia. The menstrual blood was always clotted. Married seven years. No children, no abortions. Three years previous had an attack of general peritonitis, from which she made a good recovery. Four years ago began to have a dull, dragging pain in the right iliac region and extending down the thigh. A very competent gynecologist was consulted, and he regarded the trouble due to the pressure of a displaced uterus. For the last eight weeks she had menstruated but one day at the time for her menstruation. About the middle of March, 1888, patient noticed a small, hard tumor in left iliac region, which gave rise to little discomfort. The tumor grew very rapidly after discovery, and was very painful, requiring the free use of anodynes to keep her comfortable. The breasts were tender, but the areola not markedly pigmented. The tenderness of breasts always occurred with menstruation. I saw her at her house in consultation with her family physician, Dr. J. R. Davidson, May 6th, 1888. Upon palpation, I found a growth in the left iliac, hypogastric, and extending upward in the umbilical regions and rather beyond the median line. It was very tender, nodular, and boggy to the touch. Upon percussion it was perfectly flat and did not fluctuate. Auscultation revealed no sign. Per vaginam the cervix could be made out far back towards the sacrum, but the body of the uterus could not be outlined. In the cul-de-sac of Douglas a body the size of an egg could be defined. Bimanually, cervix and growth moved as a single body. The uterine sound passed three and a half inches. Ballottement failed to elicit anything. The vagina was not distinctly tinged. The patient was examined by Drs. Boyd, Townsend, and myself a few days later. Although in consultation the intra-abdominal condition could not be agreed upon, from the urgency of the symptoms an exploration was deemed advisable—believing the growth to be a multiple uterine fibroma—with a view to hysterectomy or the removal of the uterine appendages. The abdomen was opened by the usual median incision, and upon examination of the growth it seemed sarcomatous in its nature, springing from the broad ligament and the body of the uterus. From the extent of the pelvic adhesions, and the great vascularity of the growth, and the bad prognosis of sarcoma, its removal was not undertaken. The fourth day after the operation, localized peritonitis occurred, but yielded kindly to salines and the ice coil locally. On the morning of the tenth day a slight show was noticed, and at noon the patient aborted, the fetus being about four months. There was no flooding. Her condition rapidly became more serious, and she died from exhaustion May 24th, 1888.

Autopsy three hours after death. Uterus implicated by large

fibro-myxoma, partially subserous in character; was studded with hard, nodular excrescences, thirteen in number, which completely surrounded the uterus. The great mass of the uterine tumor lay to the left of the uterus. There were extensive adhesions of tumor to the intestines and bladder. Cavity of uterus was four inches in depth and contained small portions of the placenta. There was no fluid in abdominal cavity, and but slight evidence of recent peritonitis. No further examination was made.

In addition to my personal cases, I shall take the liberty of presenting abstracts of the histories of cases which illustrate the conditions that are properly open for discussion.

CASE III.[1]—*Abdominal Section, Exploratory. Operator, Cornelius Kollock. Operation May 21st*, 1889.

Abstract.—A. C. F., aged 28, colored, married, and has one child, now ten years old. General health apparently good. Four years ago she first noticed a fulness of the abdomen, more to the right than the left side. When I first saw her (May 10th) she was very much distended. The prominence was central and very high up. Tumor movable, hard, and nodular. Fluctuation could not be elicited; menstruation normal in every particular. She positively affirmed that she never missed a period save when pregnant the first time. There was no vaginal tinting; the os uteri was closed, and the cervix as hard as cartilage. The sound was introduced nearly four inches into the uterus, and she did not present a single symptom of pregnancy. The tumor had become so large that it produced severe dragging, dyspnea, and discomfort. An exploratory incision disclosed a very large subperitoneal fibroid springing from the fundus by a broad pedicle. The uterus was occupied by twenty-two other fibroids varying in size from an orange to a cherry. A supravaginal hysterectomy was done, and the uterine cavity contained a macerated fetus of two and a half or three months. The patient was doing well June 1st. A recovery.

CASE IV.—*Abdominal Section for Multiple Fibro-Myxoma. Operator, M. Péan. Operation December 15th*, 1874.

Abstract.—Madame B., aged 37, a widow for several years, always sterile. For several years had suffered from severe menorrhagia. Recently tumor had grown very rapidly and flooding had been very exhausting. M. Péan diagnosticated fibro-myxomata and proceeded to their removal, which he did by enucleation. The operation was followed by abortion on the second day. Gestation had advanced between four and five months. Patient recovered.

CASE V.—*Abdominal Section for Fibro-Myxoma. Operator,*

[1] The abstract of this case is made up from notes kindly furnished by Dr. Kollock, who has frankly stated the facts in this and another case, and generously offered them for publication.

Professor Freund, Strassburg. Contributed by Dr. J. W. Poucher. Poughkeepsie, N. Y.

Abstract.—Patient aged 50, married many years, always sterile. Fibroid had existed for some time longer than discovered pregnancy. When the uterus was opened, to his own and everybody's surprise Freund brought out a buxom fetus, which also seemed very much surprised, for it immediately began to cry. It proved to be at least eight months old and all right. There was also a large fibroid which was very vascular. A supravaginal hysterectomy was done to complete the operation, and the result is unknown to me. This case is now reported for the first time.

CASE VI.—*Abdominal Section, Exploratory. Operator, Robert Barnes, M.D. Operation January 7th,* 1877.

Abstract.—Mrs. C.; had been married several years; no children or abortions. Always menstruated punctually until three months ago, without excess, since which menstruation has been suspended, and pelvic pain has arisen, with dysuria, retention, and intrapelvic pain accompanied by vomiting. A fortnight ago, swelling in the hypogastrium from pelvis upward became marked, and the abdomen was found partly filled by a tumor taken to be a fibroid. January 4th, 1877, Dr. Barnes saw the case and found an enlargement of abdomen extending to a little above umbilicus on the right side, and not quite so high on the left. It was tender and lumpy, and the os uteri was felt high up above the upper edge of the symphysis pubis, small and compressed transversely. Sound passed two and one-half inches. Behind tract of sound, and apparently behind tract of uterus, another dense tumor could be felt. By rectum the mass could be felt rounded, filling the sacral hollow. Two days later, Drs. Baber, Braxton Hicks, and Barnes met in consultation and discussed the probabilities of the case. Under ether, an attempt was made to dislodge the tumor from the pelvis, which was only partially successful. They thought the probability preponderated in favor of an ovarian tumor partially solid. It seemed impossible that fibroids could be developed so rapidly. The condition of pain, retention, vomiting, and commencement of strangulation of impacted mass, made it imperative to give quick relief. Gastrostomy was decided upon with this end in view. Abdominal section revealed general peritonitis. On summit and sides of tumor were numerous nodular projections. Trocar plunged in and a little blood and foul air were obtained. Tumor and uterus were removed by supravaginal amputation. Uterine cavity contained three months' fetus. Death from shock.

CASE VII.—*Abdominal Section for Fibro-Myxoma. Operator, Dr. Alex. Patterson. Operation December 11th,* 1884.

Abstract.—Mrs. M., aged 36, married nine years. Menstruation always regular until last few months. Now it was entirely suppressed. For years menstruation had been profuse. August, 1884, the patient accidentally discovered tumor in left side of

abdomen about the size of a small plum. In September, tumor began to increase rapidly and to be accompanied with great pain. September 22d, a specially qualified consultant was called; his diagnosis was hematocele in Douglas' pouch, and he advised against operative procedures. Matters becoming more serious, an eminent surgeon was called, who gave his opinion in very decided terms that the tumor was uterine fibroid and should be left alone, as an operative procedure would only hasten a fatal result. I was called December 21st, and thought the case to be one of fibroid that could be removed and the patient recover. In the left iliac fossa, close to pelvic brim, the tumor was most readily encountered. It was traceable across lower abdomen, getting lower to the brim on the right side. The growth was firm, elastic, nodular, and painless on pressure. Per vaginam, pelvis filled by small mass and the vagina was roofed across. Uterus completely fixed. Wishing to be sustained, I called a medical friend well versed in such matters, and after a prolonged examination he decided the case to be one of ovarian disease, probably double, and that it should be removed. An endeavor was made to introduce the uterine sound, but it could only be made to pass one and one-half inches. Abdominal section revealed multiple fibro-myxoma. A supravaginal hysterectomy was done, and uterine cavity contained a four months' fetus. Patient recovered without a bad symptom.

CASE VIII.—*Abdominal Section. Multiple Uterine Fibroid. Operator, Dr. Geo. Granville Bantock. Operation April*, 1884.

Abstract.—When patient first came under his notice two years prior to operation, the tumor was of small size, but menstruation was excessive. Whether as a result of medical treatment or otherwise, it was a singular fact that the menorrhagia diminished until the flow became quite moderate and even scanty, while the tumor kept on growing. For over three months before operation, menstruation had been absent.

As the patient was single, his suspicions were not aroused, and it was impossible to examine the uterine body, for the cervix was so drawn up that the os could only be touched with the tip of the finger, while the uterus was covered in front by one of the tumors. After separating omental adhesions to the larger of the two tumors, which had undergone cystiform degeneration, and turning out the whole mass, it was easy to secure a very good pedicle at the level of the internal os. He confessed he was rather glad he had not diagnosed the pregnancy, for had he done so he probably would not have performed the operation. He was happy to say that when last seen patient was in excellent health, and even contemplating marriage. Uterus contained a three months' fetus.

CASE IX.—*Abdominal Section. Supravaginal Amputation of Pregnant Uterus complicating a Multilocular Fibroid Tumor. Operator, Dr. James H. Etheridge.*

Abstract.—Mrs. A. B., aged 34, no children. First experienced

uterine symptoms four years ago. Two years later suffered from retroversion and impaction of the uterus, at which time a subperitoneal myoma was diagnosticated. In May, 1886, four years since first symptoms, patient suffered from distressing nausea. Mammary changes supervened. In the ensuing three months the tumor grew rapidly, and Dr. Knox diagnosticated pregnancy. At expiration of three months he decided to produce abortion. August 1st, 1886, sound was introduced into uterus four inches. Its withdrawal was followed by a small amount of blood, the nausea and vomiting ceased, and the mammary symptoms disappeared. Nothing further followed indicating the previous existence of pregnancy or abortion, and the conclusion was reached that conception had not occurred. The rapid encroachment on the abdominal organs, her diminishing strength, emaciation, and suffering, were progressively killing her. From external examination it was found that the tumor extended from right iliac fossa across the abdominal cavity in a straight line to the spleen. Its length was apparently double or treble its width. It was freely movable, free from adhesions, and solid. It presented great tenderness in right iliac fossa. Per vaginam the cervix uteri was found very high up in the left iliac fossa, and the fundus uteri was apparently thrust into the right iliac fossa. The whole tumor moved with the uterus. A very slight resiliency offered to conjoined manipulation led me to think that I had to do with a fibro-cystic tumor of the uterus. The sound entered the uterus four inches and seemed to pass toward umbilicus. The tumor was removed by supravaginal hysterectomy, and the patient died from septicemia. Examination of the tumor showed it to be fibro-myxomatous, and that the uterine cavity contained a three months' fetus lying in its unruptured membranes. Fetus was evidently alive at time of operation. The cervical canal was five and one-half inches long. Weight of tumor, ten pounds.

CASE X.—*Fibro-Myxoma of Uterus complicated by Pregnancy. Reported by J. Lucas Worship, Esq.*

Abstract.—Mrs. C. C., aged 35, married two and one-half years. Family history good, previous health good. Six months after marriage she suffered from severe pain in the left iliac region, but continued her service. Later she began to enlarge and was examined repeatedly, but no signs of pregnancy ever elicited save amenorrhea. Never suffered from menstrual disorders. Tumor grew very rapidly and was irregular. Cervix was very high, firm, and near the sacrum. A diagnosis of malignant tumor of the uterus was made and palliative treatment instituted, but the patient died in two months. Post-mortem examination revealed multiple fibro-myxoma of the uterus and pregnancy. The period of gestation at death, six months.

INDICATIONS FOR OPERATION.

A study of the clinical histories, especially in the cases of fibro-myxoma, shows that there was an immediate demand for operative procedure. Robert Barnes so tersely states the indications for abdominal section in his case (see Case VI.) that the repetition is useful: "The condition of pain, retention, vomiting, and commencing strangulation of the impacted mass made it imperative to give quick relief." To these symptoms exploratory laparatomy reveals that other often fatal condition —peritonitis. Alex. Patterson's case was equally unpromising, but happier in its results. Pain has been a prominent symptom in nearly all of the cases, often requiring the continuous use of anodynes. Palpation gave so much distress that, if done at all, it was imperfect and unsatisfactory. The rapid growth of the tumor has led to dyspnea, dys uria, and constipation, or to more active obstruction of the bowel, edema of the extremities, vomiting, emaciation, and peritonitis. Universal experience has shown that temporizing with cases wherein there are symptoms such as have been related has been uniformly disastrous. The case of J. Lucas Worship, Esq., has been introduced in this article for the purpose of illustrating this point. Teachers have been often too prone to advise waiting for extended observation. It seems to me that Mr. Lawson Tait has carefully and clearly enunciated that which is the best practice, in one of his numerous controversial papers (AMERICAN JOURNAL OF OBSTETRICS, vol. xxi., p. 295), in which he says: "When the conditions within the abdomen are such that the life of the patient is evidently threatened, or the conditions continue in such a direction as to defy ordinary treatment and make life unendurable, do not let any doubt as to the accuracy of the diagnosis stand in the way of an exploratory incision, for this will at once make a complete diagnosis possible and open a road for successful treatment."

DIAGNOSIS.

The influence of gestation upon fibro-myxoma demands our consideration. The consistence of the tumor has been variously described as firm, doughy, soft, fluctuant—indeed, the sense of fluctuation has led the surgeon more than once to puncture the tumor with the aspirator needle or trocar. There can be no reasonable doubt that the different degrees of density are de-

pendent upon three conditions, viz., the structure of the tumor, its situation, and certain degenerative changes. The growths made up largely of muscular elements are more readily affected by the increased intrapelvic circulation of pregnancy, become more edematous and grow more rapidly, than those in which fibrous elements preponderate. Intramural fibro-myxomata, from their more intimate connection with the uterine walls, exhibit more active metamorphoses than do subperitoneal ones with slender pedicles. Pregnancy may also bring about necrotic degeneration and softening from pressure. If the foregoing facts are sufficiently established, then sudden enlargement and softening of pre-existing fibro-myxoma is a valuable sign of pregnancy. But this rapid increase in volume has not been uniformly observed (Gusserow, "Cycl. O. G.," vol. ix., p. 300). Again, as this rapid growth is most frequently dependent upon increased vascularity, causes other than pregnancy may operate similarly. Tumors largely myxomatous often markedly enlarge during menstruation and grow with great rapidity. On the other hand, fibro-myxomata in which sarcomatous degeneration takes place, or primary sarcomata of the giant or small round-cell type, are very rapid in their development, and are attended with great pain. In the case of Worship (l. c.), the diagnosis of malignant disease of the uterus was made. A priori, sudden increase and softening in a fibro-myxoma, to be of value as a presumptive sign of pregnancy, is dependent upon the exclusion of primary sarcoma or sarcomatous degeneration, and the soft and rapid-growing variety of fibro-myxoma.

For these reasons, in those cases where the diagnosis of pregnancy has been made upon the observance of rapid increase in size and softening in the fibro-myxoma, it is to my mind, although quite enough to arouse suspicion, based upon insufficient evidence. However, in connection with amenorrhea and mammary changes it is of great value, and yet has not been referred to with uniformity by writers. Ectopic gestation may occur in these cases, giving rise to the same changes in the tumor (see cases of Smutz and Bayle).

Amenorrhea is a valuable symptom when it occurs. It will be noted that it occurred in eleven of the twenty-six cases the study of which forms the greater portion of this paper. Yet there are circumstances which may materially modify its value as a symptom. For example, in my first case the patient gave a his-

tory of having suffered for extended periods from amenorrhea. Again, in the case reported by Bantock the menstrual flow had been growing more scanty for a long period, and finally ceased. The menstruation may continue, or an irregular flow may exist during pregnancy (Mundé, Bayle, Gusserow, and others). Abortion in cases of fibro-myxoma is most frequently induced by flooding. The sympathetic mammary disturbances which are observed in pregnancy were noted in four of the cases, but they are of themselves of no great value. In my second case they were present, but not more prominent than at any menstrual period. "The gastric, mammary, and nervous symptoms of pregnancy sometimes result from ovarian disease" (Thomas). Abdominal palpation, especially in the earlier months, can add but little in the elucidation of the problem, and often has misled surgeons of great ability. Auscultation may reveal a bruit, but who will say that it is the bruit of fibroid or of pregnancy? Later both palpation and auscultation are invaluable, revealing ballottement, quickening, and the fetal heart sounds. The sign of pregnancy to which in later years Braxton Hicks has called particular attention, the alternating contraction and relaxation of the uterus, may be entirely obscured by the fibro-myxoma. English operators have laid great stress upon this sign.

Per Vaginam.—The vaginal venous injection observed in pregnancy does not differ materially from that occurring with the large fibro-myxoma in which a concealed pregnancy may occur. In none of the cases here reported were there such changes in the cervix uteri as are regarded characteristic of pregnancy. The cervix has been described as firm, compressed transversely, elongated, and has been located high up behind the symphysis pubis, or back in the hollow of the sacrum, or operators have been unable to palpate it at all. Because of these distortions, Hegar's sign of early pregnancy has been of no assistance. The use of the uterine sound in both of my cases, and in nearly all of the cases detailed in Table I., has not aided in the diagnosis. So complete has been its failure that any facts determined by it should not enter into one's judgment of the case, and I am in great doubt if it should be used at all. Besides, the great difficulty of its introduction and the danger of perforating the uterine walls should be remembered. In sixteen cases, there were either no signs stated or an emphatic statement made that there were no signs of pregnancy present.

Granted that in a given case of fibro-myxoma the diagnosis of pregnancy is made, how does the operator know that the gestation is not ectopic, or that it is not located in a rudimentary horn of a bicornated uterus? Experience has shown that these errors have occurred, and, if diagnosis is to be exact, differentiation is demanded. But the possibility of the diagnosis of simple ectopic gestation before rupture of the tubal sac and hemorrhage is at least vigorously assailed not only abroad but in America. Manifestly this is no time for entering into the discussion of the merits of this last important question. I would not have it understood that, in my opinion, the diagnosis of early pregnancy as a complication of fibro-myxoma—*i.e.*, before the fourth month—is impossible in all cases, but that the diagnosis is, at the best, a matter of presumption, and that it is often impossible when immediate operative interference is demanded. With no desire to be critical, I must say that many of our text-books give very meagre accounts of pregnancy as occurring with fibroids. Barnes, after writing at length, came to the conclusion "that the chief characteristic in the complication was the want of uniformity in the uterus." His statements regarding the diagnosis of pregnancy with ovarian cyst are equally as clear. Thomas makes no mention of the complication; and Byford, after referring to mistakes made by himself, Sims, Wells, and others, says: "A careful examination of the cervix uteri, the abdomen, and the breasts for evidences of pregnancy will seldom fail to make the diagnosis of this complication clear." Hart and Barbour, Emmet, Hewitt, Simpson, Scanzoni, Courty, and many obstetric authors either do not mention the complication or advise waiting. Prof. Skene relates the histories of two cases wherein pregnancy occurs with fibroid, and in which the diagnosis was not made until months later. Karl Schroeder expresses the opinion "that it may be exceedingly difficult to differentiate between simple fibroids and fibroids complicated by pregnancy." Hirst ("Am. Sys. Obst.") says: "In rapid-growing, soft myxoma, the diagnosis may be exceedingly difficult or impossible." Gusserow ("Cycl. O. G.," vol. ix.) rather neglects early pregnancy, but attributes the error in the later stages to carelessness. The editor of Spiegelberg's "Midwifery," 1887, makes a statement "that as a rule, however, there is very great difficulty, especially in the cases of intramural growth, since, at any rate during the first four or five

months, they often conceal the pregnancy. The most careful examination may not elucidate the case." After the fourth or fifth month, the error has occurred but three times. In Karström's case, ascites as a complication obscured the diagnosis. In the case of Prof. Freund, of Strassburg, the patient, fifty years old, always sterile, presented no symptoms that led even to a suspicion of pregnancy. It is only fair to Dr. Barnes to say that he suspected the possibility of pregnancy, but from the history of the case there seemed no ground for the suspicion, and it was not confirmed in consultation.

There is no error in diagnosis which brings the physician in so much undeserved disrepute in the popular mind as a failure to recognize the presence or absence of pregnancy. Yet I am familiar with several cases where either this error has led to abdominal section or all the preparations for one have been made. Recently a member of the British Gynecological Society amused a meeting exceedingly by relating a case wherein a specially qualified operator journeyed many miles to a case. After his arrival, late in the afternoon, he examined the case carefully, decided the growth to be fibroid and that it should be removed. Being much fatigued by his journey, he decided to remain and perform the operation the following morning. Early the next morning he was gravely informed that his services would not be required, as the patient had, during the night, given birth to a fine baby and the tumor had disappeared. Nor does this experience stand alone. Others have brought cases to the operating table with a dilating os uteri. Of the nine cases of simple pregnancy found in the table, five of them occurred early in the history of abdominal surgery, when methods of differential diagnosis were not as well taught and practised as now. I want to call attention particularly to the case of Dr. Wm. Varian. From the history of the case, I have no doubt that many, if not all, of us would have been led into the same disagreeable error. Dr. Prince has a similar experience. The frequency of the complication of undiagnosticated pregnancy in single women will be noted in the tables. I am reminded of a remark attributed to the late Prof. MacNaughton, in answer to the inquiries of an anxious mother who had called him very late one night to see her daughter, who had just returned from a ball in a blissful state of intoxication. "Ah, madam, the best slip, the most cautious fall! Your daughter will be better in

the morning." It is well to have the quaint saying of the good old Scotchman always in mind when single women present themselves with abdominal tumors, and we should never be in a hurry to operate. The history obtained from the patient, and often from her relatives as well, will be full of deceit at best, and may be, as in Prince's case, made to fit minutely a variety of actual disease.

Such cases should be subjected to the most painstaking physical examination, nor should any protestations upon the part of the patient deter the surgeon from making a complete examination of the vagina and breasts as well as of the abdomen. His judgment must be based upon the physical examination entirely.

Pregnancy as a complication of ovarian cyst is met with considerable frequency, and is not always diagnosticated before operation. We can hardly enter into the discussion of the symptoms, for in twenty-eight cases that go to make up the table none are stated save in one case, amenorrhea. In some of the cases, the operators state there were absolutely no signs of pregnancy. The period of gestation in twenty-one cases was before the fourth month. Three others occurred in single women, and in two gestation was about the fifth month. The presumptive signs of pregnancy occurring with fibro-myxoma are, in cases of ovarian cyst, obscured or modified, yet to some of them greater diagnostic value can be attached. Close attention to menstrual disorders will occasionally determine the fact that the patient's menstruation has been perfectly normal until a recent period, when it ceased altogether. This is a sufficient ground for suspicion. The examination of the breasts should be a matter of routine, yet the evidence obtained will be of no great value. The vaginal examination here will be of greater value than with fibro-myxoma. If the uterus can be palpated and found regularly enlarged, yet independent of the tumor; if the cervix is softened and os patulous; if the vaginal walls are tinged—then there exist strong presumptive signs of pregnancy. Hegar's sign in such cases, if demonstrable, makes the diagnosis absolute. Palpation of the abdomen in the earlier months, when the error occurs, is of no value. When the uterus rises into the abdomen, then palpation and auscultation are, with ballottement and the sign of Braxton Hicks, sufficient, as a rule, to make the diagnosis. But the pregnant uterus may be obscured anteriorly by the large cyst;

it may be retroverted and impacted in the pelvis, or drawn up and dislocated laterally by the rapidly increasing cyst, so that it will be impossible to explore it satisfactorily; then the diagnosis is impossible. When the slightest suspicion of pregnancy exists in connection with ovarian cyst, the use of the sound is absolutely unjustifiable, although it seems, in the cases where it was used, that it only confirmed the error in diagnosis. Accumulated experience has shown conclusively that abdominal section for ovarian cyst in the pregnant woman should be done generally, and without the previous induction of abortion.

CONCLUSIONS.

I. Finally, from the study of the sixty-eight cases, I am convinced that the errors of diagnosis are dependent, in a large proportion of the cases, upon conditions which make it absolutely impossible, when these conditions recur in other cases, to avoid the same diagnostic conclusions.

II. That it is the duty of every operator, before making an abdominal incision, to secure, either himself or by a specially qualified assistant, a fully classified, written statement of the facts which go to make up the clinical history of the case, together with the results of the physical exploration made by the operator and his consultants, using a formal blank statement (that of Sir Spencer Wells, for example), so that no facts may be omitted; that no part of this duty should be delegated, except under supervision, to internes of hospitals.

III. That the probable diagnosis should be based upon the physical signs contained in the notes, corroborated, with few exceptions (unmarried and ignorant patients), by the rational signs contained in the clinical history, and not by simple abdominal palpation and "the dim light of a pelvic examination."

IV. That whenever the slightest probability of pregnancy exists, it should be fully explained to the patient and to her friends.

V. That the necessity for operative relief, and the consequence of delay or neglect, should be carefully stated to the parties interested before obtaining their formal consent to the operation.

VI. That it is the duty of every operator to report fully all such cases, that the methods of diagnosis may be improved if possible.

VII. That it is the duty of the profession at large to maintain that pregnancy may be absolutely concealed, especially prior to the fourth or fifth month, by other intra-abdominal conditions.

TABLE I.

ABDOMINAL SECTION COMPLICATED BY PREGNANCY NOT DIAGNOSTICATED BEFORE OPERATION.

Case.	Operator.	Reported.	Age.	Civil condition.	Parity.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy prior to operation.	Remarks.
1	M. Péan....	Clin. Chirurg., Paré, 1876, vol. i., p. 679.	37	W.	0	Fibro-myxoma of uterus.	Fibro-myxoma of uterus and pregnancy.	4th mo.	R.	None stated...	Tumor rapid growth, very large. Patient a widow for nine years. Aborted second day. Enucleation.
2	Prof. Freund	Personal letter Dr. J. W. Poucher, of Poughkeepsie, N. Y., who saw operation.	50	M.	0	Do.	Do.	8th mo.	R.	None.....	Porro's operation.
3	Geo. Granville Bantock.	Brit. Gyn. Jour., vol. ii., p. 65; also pers'al letter.	34	S.	0	Do.	Do.	3d mo.	R.	Amenorrhea for three months.	Porro's operation.
4	J. H. Etheridge.	Amer. Jour. Obst., vol. xx., p. 69.	34	M.	0	Do.	Do.	3d mo.	D.	Amenorrhea, mammary changes.	Porro's operation.
5	Meredith....	Amer. Jour. Obst., vol. xix., p. 923.	..	..	..	Do.	Do.	2d mo.	D.	Amenorrhea for two mos.	Porro's operation.
6	Hofmeier....	Die Myomotimae, p. 76, etc.	41	M.	0	Do.	Do.	3d mo.	R.	Pregnancy not absolutely excluded. Amenorrhea.	Porro's operation.

7	Dirner.....	Centralb. für Gynäkol., 1887, Bd. ii., p. 119.	40	M.	0	Fibro-myxoma of uterus.	Fibro-myxoma of uterus and pregnancy.	2d mo.	R.	Amenorrhea...	Porro's operation. Fetus dead and macerated.
8	Karström...	Hygeia for April, 1887.	36	M.	1	Exploratory ...	Do.	5th mo.	..	None.....	Porro's operation.
9	Kaltenbach.	Centralb. für Gynäkol., 1887, Bd. ii., p. 435.	33	M.	1	Fibro-myxoma of uterus.	Do.	2d mo.	R.	Do.	Porro's operation. Disintegration of tumor begun; fetus macerated.
10	Alex. Patterson.	Glas. Med. J., April, 1885.	36	M.	0	Do.	Do.	4th mo.	R.	Do.	Porro's operation.
11	R. Barnes...	St. Geo.'s Hospital Report, 1874–76, vol. viii., 91–95.	..	M.	0	Exploratory ..	Do.	3d mo.	D.	Amenorrhea...	Porro's operation.
12	Wesseige....	Bull.de l'Acad. Royal de Belgique, 11, Cer. 3, No. 4.	35	M.	1 (ab.)	Fibro-myxoma of uterus.	Do.	....	D.	Do.	Porro's operation. Called attention to absence of signs of pregnancy.
13	A. C. Bernays.	Reprint Clin. Rep. of Surgical Cases.	35	S.	0	Fibro-myxoma of uterus. Possibility of pregnancy (?)	Do.	Viable.	D.	No symptoms stated in report.	Porro's operation.
14	J. Lucas Worship.	Lond. Obst. Trans., vol. xiv., p. 305.	35	M.	0	Malignant tumor of uterus	Do.	4th mo.	D.	None.....	Patient died in two mos. without operation.
15	J. Henry....	Gynecol. Jour., 1871, vol. ix., p. 331.	..	..	0	Fibro-myxoma of uterus.	Do.	4th mo.	D.	None.....	Patient died two hours after operation.
16	Prof. Wyeth.	Personal letter.	..	..	..	Do.	Do.	2d mo.	D.	None.....	Died from intraperitoneal hemorrhage.
17	Bayle.....	Annales de Soc. de Méd. St. Etienne.	..	..	..	Do.	Do.	....	D.	None.....	Patient flooded very severely.

Case.	Operator.	Reported.	Age.	Civil condition.	Parity.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy prior to operation.	Remarks.
18	H. Tuholski.	St. Louis Polyclinic.	36	M.	0	Fibro-myxoma of uterus.	Fibro-myxoma of uterus and pregnancy.	3d mo.	R.	Amenorrhea three months before.	Fetus dead and macerated. Patient suffered from septicemia.
19	W. Walter...	Brit. Med. J., 1883, vol. ii., p. 718, 1883.	29	M.	0	Fibro-myxoma (?). Exploratory.	Fibro-myxoma and pregnancy.	4th mo.	D.	Amenorrhea. Slight mammary changes	
20	Vander Veer	Trans. N. Y. State Med. Society, '88.	34	M.	0	Exploratory; probably fibroid, extra-uterine pregnancy.	Do.	4th mo.	R.	Do.	Exploratory incision closed. Aborted two months later and recovered.
21	Vander Veer	Not reported..	35	M.	0	Fibro-myxoma of uterus, probably exploratory.	Do.	4th mo.	D.	None.....	Patient aborted tenth day after operation, and died.
22	C. Smutz...	Brit. Gyn. J., vol. iii., p. 691.	42	M.	0	Fibro-myxoma of uterus.	Fibro-myxoma of uterus and extra-uterine pregnancy.	....	D.	Amenorrhea & slight mammary changes	Porro's operation. Death from shock.
23	Thos. Keith.	Reported in discussion by Skene, Keith, Obstet. Trs. Edinburgh, 1884–85.	..	..	..	Do.	Do.	....	D.	None.....	By after-history learned fetus had been dead nearly four years.
24	Stoltz.....	Courty, Diseases of Women.	..	..	..	Do.	Do.	....	D.	None stated...	

25	H. A. Kelly.	Personal communication.	..	..	..	Exploratory ...	Large elongated ovary 2¾ in. long, ¼ in. in width, and pregnancy.	2½ mo.	R.	None	Safely delivered at term, by forceps, of living child.
26	C. Kollock ..	Do.	28	M.	1	Do.	Fibro-myxoma and pregnancy.	3d mo.	R.	None, absolutely.	Found macerated fetus, etc.
27	Ogden.....	Canadian Practitioner, Apr., 1885. Letter Dr. A. H. Wright.	24	M.	0	Fibro-myxoma. Pregnancy suspected.	Do.	....	R.	None stated.	Abortion twelve days after operation. Tumor enucleated.

TABLE II.

PREGNANCY UNCOMPLICATED BY NEW GROWTHS.

1	Olshausen...	Personal com. Dr. F. C. Bressler.	..	..	..	Ovarian cyst..	Pregnancy and hydramnion.	...	R.	None stated...	Mistake discovered after abdominal incision.
2	Wm. Varian.	Phil. Med. and Surg. Rept., 1888, vol. ix., 457.	33	S.	0	Do.	Do.	8th mo.	R.	None. Patient wilfully deceived operator. Successful Cesarean section.	
3	O. Prince...	Personal communication.	..	..	..	Fibro-myxoma	Pregnancy	....	R.	Patient deceived operator by giving history of profuse menstruation and gradual increase for long period.	
4	Jas. Overton.	Nashville Med. Jour., July, 1866.	..	..	..	Ovarian cyst..	Do.	8th mo.	R.	None stated....	An amusing account given in Nashville Journal.

Case.	Operator.	Reported.	Age.	Civil condition.	Parity.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy prior to operation.	Remarks.
5	Warren	British Med. Jour., vol. ii., 1881.	32	Divorc'd	0	Extra-uterine pregnancy.	Pregnancy	....	D.	Mammary changes, nausea, vomiting, expulsion of decidual membrane.	Porro's operation. Coroner investigated case and operator exonerated.
6	Josh. Bradford.	Personal com. Dr. W. W. Dawson.	..	..	..	Ovarian cyst ..	Do.	...	D.	Operator misled by statements of patient, husband, and physician.	
7	Henry Miller.	Personal com. Dr. D. W. Yandall.	..	..	..	Do.	Do.	....	..	Both operators now dead, and cases unpublished, hence particulars are unknown.	
8	George W. Bayliss.	Do.	..	..	..	Do.	Do.	....	..		
9	E. E. Montgomery.	Personal com. from operator.	..	..	..	Enlarged retroverted uterus. Pregnancy suspected.	Do.	2½ mo.	R.	No symptoms, but enlarged uterus.	Safely delivered at term. Well since.
10	Prof. Czerny, Strassburg.	Do.	..	..	..	Ovarian cyst ..	Pregnant uterus and hydramnion.	....	R.	Mammary changes.	Safely delivered at term. Good recovery.
*11	Dr. Kelly, Norfolk, Neb.	Personal com. Dr. R. C. Moore.	..	..	..	Do.	Pregnancy	....	D.	None stated ...	

Cases marked * added to table since writing paper.

TABLE III.

ABDOMINAL SECTION COMPLICATED BY PREGNANCY NOT DIAGNOSTICATED BEFORE OPERATION.

Case.	Operator.	Where reported.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy.	Remarks.
1	T. Spencer Wells.	Abdominal Tumors, Philadelphia, 1885.	Ovarian cyst	Ovarian cyst and pregnancy.	....	R.	None stated	Pregnant uterus punctured by trocar. Cesarean section.
2	Thos. Hillar.	Australian Med. Jour., February, 1875.	Do.	Do.	8th mo.	R.	None	Pregnant uterus punctured by trocar. Cesarean section. Patient a single woman.
3	Wm. H. Byford.	Byford, Dis. of Women, Med. and Surg., 4th ed., 753.	Do.	Do.	7½ mo.	R.	None stated.....	Do.
4	Erskine Mason.	Byford, Dis. of Women, Med. and Surg., 4th ed., 753, and Med. Record, N. Y., 1877, vol. xii., p. 749.	Do.	Do.	6th mo.	D.	Do.	Pregnant uterus punctured. Wound closed by suture. Abortion and death. Patient single.
5	Geo. Fortesque.	Australian Med. Gazette, 1884, vol. iii., p. 169.	Do.	Do.	....	D.	Do.	Trocar puncture of pregnant uterus. Porro's operation.
6	Esmarch, Kiel.	Fedelius, Mang. Diss., Kiel, '77. Personal letter.	Ovarian cyst. Multilocular.	Do.	2d mo.	R.	None	Delivered of a healthy male six months after operation.

Case.	Operator.	Where reported.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy.	Remarks.
7	Pollock.....	London Lancet, 1862, ii., 277.	Ovarian cyst....	Ovarian cyst and pregnancy.	2d mo.	R.	None stated.....	The cyst was tapped four months before operation, and patient aborted at that time.
8	Bateman ...	London Lancet, 1869, ii., 410.	Do.	Do.	....	R.	Do.	
9	J. Marion Sims.	Trans. Am. Med. Gynecol. Soc., vol. v., p. 108.	Do.	Do.	4th mo.	R.	Do.	Patient went to term safely.
10	W. L. Atlee.	Do.	Do.	Do.	2d mo.	R.	Do.	Patient died two months later from vomiting of pregnancy.
11	Do.	Do.	Do.	Do.	....	R.	Do.	Patient went to term.
12	F. Bird.....	Do.	Do.	Do.	....	R.	There were absolutely no signs of pregnancy.	Patient aborted second day after operation.
13	G. Kimball.	Personal communication.	Do.	Do.	2d mo.	D.	Pregnancy suspected, but possibility denied by the patient.	Died from peritonitis.
14	Do.	Do.	Do.	Do.	3d mo.	D.	Pregnancy suspected by attending phys., who explored uterus day before operation.	Do.
15	Dr. Dunlap..	Trans. Am. Med. Gynecol. Soc., vol. x., p. 111.	Do.	Do.	....	D.	Operator misled by statements of attend. phys.	Patient aborted, rapidly sank, and died.

16	Theodore A. Reamey.	Personal communication.	Ovarian cyst....	Ovarian cyst and pregnancy.	2d mo.	D.	No symptoms ...	Patient aborted and died.
17	J. C. Warren	Do.	Do.	Dermoid cyst of ovary and pregnancy.	½ mo.	R.	Do.	
18	A. Reeves Jackson.	Do.	Do.	Ovarian cyst and pregnancy.	2½ mo.	R.	Do.	Patient safely delivered at term.
19	Hunter Maguire.	Do.	Do.	Do.	3d mo.	R.	No symptoms noted or suspected.	Patient safely delivered at term.
20	S. D. Gross..	Personal com. from Dr. J. M. Barton.	Exploratory.....	Do.	3d mo.	R.	None.....	Patient aborted same night.
21	E. W. Cushing.	Annals of Gyn., Boston, 1888, vol. i., p. 335; also personal communication	Do.	Parovarian cyst, 40 pounds, and pregnancy.	4th mo.	R.	Amenorrhea.....	Patient safely delivered at term.
22	O. Prince...	Personal communication.	Parovarian cyst and pregnancy.	Do.	3d mo.	R.	Do.	Do.
23	C. Kollock.	Do.	Ovarian cyst large.	Small ovarian cyst and pregnancy (twins).	4th mo.	R.	None.....	Safely delivered of twins. Trio well four months later.
24	Geo. E. Jarvis.	Abstracts of records Hartford Gen'l Hospital.	Ovarian cyst (?).	Ovarian cyst and pregnancy.	5th mo.	D.	None stated.....	Patient aborted on third day and died.
25	H. A. Kelly.	Personal communication.	Exploratory.....	Large, elongated ovary 2¾ in. long, ¼ in. in width, and pregnancy.	2½ mo.	R.	None.....	Safely delivered at term, by forceps, of living child.
26	Dr. Cameron, St. John's Hos., Toronto, Can.	Personal communication Dr. A. H. Wright.	Hydro-salpinx...	Hydro-salpinx and pregnancy.	1½ mo.	R.	Do.	Safely delivered at term.

Case.	Operator.	Where reported.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy.	Remarks.
27	Dr. Cameron, St. John's Hos., Toronto, Can.	Personal communication Dr. A. H. Wright.	Ovarian cyst ...	Ovarian cyst and pregnancy.	3d mo.	R.	None.....	Has now nearly reached full term.
28	Dr. Winckel, Munich.	Personal communication from operator.	Ovarian cyst. Multilocular.	Do	5½ mo.	R.	Do.	Patient safely delivered 3½ months after operation. When uterus was exposed child moved vigorously.
*29	T. Spencer Wells.	Abdominal Tumors, Phila., 1885, pp. 118, 119, and 120.	Ovarian cyst	Do.	Viable.	R.	None stated	This is Case 507 of first series. Labor soon after operation.
*30	Do.	Do.	Do.	Do.	3d mo.	R.	Do.	Case 1138 of second series.
*31	Mr. Burd, Shrewsb'y.	Do.	Do.	Do.	4th mo.	R.	Do.	Aborted second day after operation.
*32	J. E. Sommers, Nebraska.	Personal communication Dr. R. C. Moore.	Do.	Do.	1½ mo.	R.	Do.	Aborted after operation.
*33	Jos. Price	Personal communication from operator.	Do.	Do.	2d mo.	R.	None.....	Safely delivered at term.
*34	Do.	Do.	Exploratory	Strongly adherent left ovary and pregnancy.	3d mo.	R.	Do.	

Cases marked * added to table since paper was written.

TABLE IV.

PREGNANCY IN BICORNATED UTERI, ETC.

Case.	Operator.	Reported.	Age.	Civil condition.	Parity.	Condition diagnosticated before operation.	Condition found at operation.	Period of gestation.	Result.	Symptoms, if any, of pregnancy prior to operation.	Remarks.
1	A. McDonald.	Obst Trans. Edinburgh, 1884–85, p. 76.	23	M.	0	Fibro-myxoma of uterus.	Pregnancy in bicornated uterus.	...	R.	Very ignorant patient. Indefinite history.	Hysterectomy. Uterus contained macerated fetus weighing five pounds.
2	Sclifossowski.	Red. Gen. de Clin., No. 13, 1889.	..	M.	1	Exploratory ...	Pregnancy in right corner of uterus.	7th mo.	R.	No definite symptoms. Patient flooded severely.	Fetus dead and macerated.
3	P. F. Mundé	N. Y. Obst. Society, May 7th, 1889. Personal letter.	..	M.	1	Fourth month tubal pregnancy.	Pregnancy in right corner of bicornated uterus.	....	R.	Physical symptoms. Sore all over right side of abdomen.	Sound before operation always entered three inches to the left. Incision in abdomen closed. Abortion. Recovery. (Letters of May 11th, 1889.)
4	J. E. Janvrin	....	..	..	..	Extra-uterine pregnancy.	Do.	...	D.	....	
5	H. O. Marcy.	Personal letter.	..	..	..	Exploratory ...	Interstitial pregnancy thought probable.	3d mo.	R.	No symptoms.	Aborted and recovery.

BIBLIOGRAPHY.—In addition, in tables, to references found in "Diseases of Women," Barnes, Simpson, Hart and Barbour, Hewitt, Jones, Courty, Scanzoni, Hegar and Kaltenbach, Péan, Hofmeier, Von Flammerdinghe, Tait, Wells, Thomas, Emmet, Skene, Byford, and Goodell.

Obstetrics: Barnes, Playfair, Simpson, Leishmann, Schroeder, Spiegelberg, Cazeaux, Tarnier, and Lusk.

Reports: London and Edinburgh Obstetrical, St. George's and Guy's Hospitals, Journal British Gynecological Society, AMERICAN JOURNAL OF OBSTETRICS, Annals Gynecology, etc.

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