Clinical Illustrations
of
Ectopic Pregnancy

by
C. F. Arrowsmith M.D. M.B. C.M.
1898.
Clinical Illustrations of Ectopic Pregnancy.

It is intended to study in the present paper, the clinical records of several cases seen in the course of practice at Antananarivo, Madagascar, which were diagnosed as ectopic pregnancy.

The diagnosis was in some cases verified by operation or by the subsequent history; in others it was unverified.

The clinical aspects alone will be considered, as the state of civilization in Madagascar did not permit of the performance of postmortem examinations except in exceedingly rare instances.

Some attention will be paid to the subject of the differential diagnosis and there will be appended an account of some cases of other conditions which gave rise to actual error in diagnosis or else required considerable care in diagnosing.

The absence of opportunity for pathological investigation renders it...
impossible to put forward any suggestions of value in proof or disproof of the existing views on the Aetiology of Pelvic Pregnancy.

It may however be stated that sufferers from diseases of women form a large and important part of the patients treated in Inpatient and Outpatient practice in Madagascar. Out of a total of 4832 patients treated as Inpatients during 6 years, 46.7% were for gynecological complaints; this is nearly 14% percent of all cases. Of the particular diseases which compose this total, the most frequently met with were Pelvic Peritonitis, Metritis, Endometritis, Chronic Cervical Catarh, Displacements of the Uterus, Neoplasms as Uterine Fibroids or Ovarian Cysts; diseased conditions of the Fallopian tubes were diagnosed occasionally but the diagnoses were not verified by operation or postmortem examination; of pelvic Haematocoele or Haematoma there have been many cases. Disorders of menstruation are naturally extremely common.
The predisposing causes of ectopic pregnancy are thus seen to be of frequent occurrence, viz.: pelvic peritonitis often resulting in marked adhesions and displacements, tubal disease and tumors. In "Ectopic Pregnancy" by Webster, on page 1, the predisposing causes named are: peritonitic bands constricting the Fallopian tube, polyp in the tube lumen, tumors of the uterine wall, tumors of surrounding parts pressing upon the uterus, abnormal foldings of the uterine wall, diverticula from the lumen in the wall of the uterus, displacements and hernia of the appendages, adhesions between the tube and neighboring parts, thickening of the tube wall by inflammation and endosalpingiosis.

The incidence of so much gynecological disease is due to several causes. Of these the habit of early marriage is prominent; the usual age for marriage being about 15, but many marry even at 13 or 14 years of age. The age of puberty is 12 or 13 but statistics on these points are difficult to verify absolutely, owing to the
people as a rule not remembering dates of birth, onset of menstruation, etc.
The early marriages and the frequency of sexual intercourse may lead to a congested condition of the pelvic organs. The state of morality generally is a very low one, illicit intercourse being unhappily very common indeed. Gonorrhoea is very prevalent.
Abortions are frequently met with, especially in the early months of pregnancy and are very often unrecognized or neglected. So that subinvolution, Peritonitis and Cellulitis are common sequelae.
Syphilis is of extreme frequency, especially in the form of Condylomata, usually appearing in early infancy, rarely in either sex is a primary sore met with.
Many women are sterile and many give a history of one confinement or abortion early in life and no subsequent pregnancy. These facts may serve, to some extent, to explain the rather frequent occurrence of Ectopic Pregnancy. Sixteen cases are to be recorded, seen during eight years, of whom eleven were resident in Antic-
-anes, a city long supposed to have a population of 100,000 but in a recent census which is probably incorrect, stated as 42,000. This is rather a high percentage.

The cases now to be recorded form a commentary illustrative of most of the symptoms and phenomena found in uterine pregnancy. They will be divided into:

A. Cases illustrative of the first half of pregnancy.

B. “ ” “ ” latter “ ” of pregnancy

A. Cases illustrative of the first half of pregnancy.

This case shows clearly the symptoms of early termination of the pregnancy and of pelvic haematoccele: she was seen previous to rupture but the condition, although held to be probable, was not diagnosed actually until rupture had occurred.

The patient, who was about 19 years of age, entered Hospital in May, 1876, complaining of
severe paroxysms of pain in the lower part of the abdomen with irregularity of menstruation. She was not under my care but I had the advantage of being able to give the case a occasional examination.

Previous History. She gave a history of having had 2 months Amenorrhoea about a year ago, which ended in what was probably an abortion, followed by a painful illness with swelling in the abdomen, probably Peritonitis. On recovering from this, her menses were normal in character but on the first day of menstruation she experienced pain in the back, which she had not done before. There was no history of premenstrual pain.

History of the Present Illness. She states that her last period occurred on April 5th; there was one month's Amenorrhoea and a fortnight after the period had become due there was a severe attack of pain in the hypogastrum, accompanied by painting. Poultices were applied for the pain and a slight discharge appeared on May 25th, i.e. after 7 weeks Amenorrhoea. The precise character of this discharge was not ascertained.
Since that date she has had intermittent attacks of pain with an irregular show during the last day or two.

**Examination. Inspection.** The denia Region is fairly well marked and the nipples and areola are much darkened.

Per vaginam. (June 30) The cervix is found to be soft in character and to point towards the left side. The body of the uterus is small and is pushed far out to the right side. In the left lateral fornix is felt a soft irregularly-rounded swelling which extends into the anterior fornix and pushes the uterus over to the opposite side of the pelvis; a large pulsating artery is felt near this swelling.

**Progress.** On June 4th she is reported to have had much pain, vomited twice and to have felt exceedingly weak. The pulse was 108.

On June 6th micturition is stated to have been painful and infrequent. She was paler than she was on her admission.

Amitral systolic murmur was detected.
On vaginal examination, the cervix and the uterus were much as before, but the latter was not quite so well defined. The anterior vaginal wall was somewhat depressed and the left lateral fornix was occupied by a very large effusion which reached up to the umbilicus, but seemed to involve the anterior part of the uterus more than the posterior, as nothing was felt in the posterior fornix and the finger could be passed up behind the mass.

It was then diagnosed that the patient was suffering probably from decamp pregnant amenorrhea and the condition of the linea nigra and areola pointed to pregnancy; the metrorrhagia, the pain, the want of hypertrophy in the uterus, the presence of a distinct rounded soft swelling in the left lateral fornix detected on first examination made it probable that the ovum was not in the uterus; the previous history of active pelvic mischief strengthened this; the anemia, weakness and rapidly-formed hard swelling pointed to the presence of an effusion of
blood in the pelvis.

Such effusions are to be divided into two classes viz. Haematoma and Haematocèle, the distinction depending on whether, as in the first named, the blood is pressed into the cellular tissue alone or as in the second, whether it occupies the peritoneal cavity.

Tait in "Diseases of Women and Obstetrical Surgery" page 460 advises the use of the term "Pelvic Haematocèle" to cover all effusions of blood which have their origin in the pelvis and he differentiates them into intra and extraperitoneal Haematocèle. In this paper the two classes will be alluded to as Haematoma and Haematocèle.

The position of the effusion in this case viz. entirely lateral points to its having been a Haematoma, i.e. an effusion of blood into the connective tissue of the broad ligament, due in this instance to the rupture of a Tubal Pregnancy in that situation.

The character of the swelling however is more in favour of its having been a Haematocèle due to Tubal Abortion as the effusion, though large, was so markedly
limited and the finger could pass behind it on vaginal examination.

A discharge is stated by Bland Sutton ("Surgical Diseases of the Ovaries and Fallopian Tube, including Tubal Pregnancy" edition 1896 page 251) and by Gullingsworth ("Tubal Gestation, an address delivered Nov. 12, 1897, published by Medical Publishing Company, p. 22) to be found more frequently in Tubal Abortion, and the hematocoele is stated by Gullingsworth (op. cit. p. 24) to be "determined not so much by the influence of gravitation as by the position which the mouth of the tube happened to occupy at the time."

This would explain why a large effusion should not involve the pouch of Douglas as it might be expected to do: an effusion bounded anteriorly by the anterior abdominal wall and posteriorly by the anterior layer of the broad ligament and, after the upper limit of that had been reached by bowel or omentum and thus shutting off the pouch of Douglas is the condition that probably existed here. Progress: A careful lookout was kept on the pulse and temperature. The pulse-rate varied between 108, 104 and
120 per minute and the temperature between 97° and 100°F. The quick pulse and the low temperature were the probable result of the internal haemorrhage and the higher temperature of 100°F is in accordance with the statement made by Ballingworth (op. cit., pp. 24 and 25) that "a rise of temperature is amongst the more frequent phenomena that characterize the acute attacks of illness in cases of tubal abortion." This may be due to slight peritonitis from the irritation of the effused blood as such a condition is stated by him (op. cit., p. 29) to have been found at operation on a case characterized by marked rise of temperature.

Attacks of pain recurred with more or less severity for some days for which Limipeninum Belladonnae and Suppositoria chlorophila were exhibited with success.

On June 9th the patient was examined again per vaginum and the cervix was found to be directed posteriorly; the anterior fornix was depressed by a hard body which was taken to be the uterus, but was more probably a merely effused clot. A large swelling was
found on the left side, extending up to the level of the umbilicus and hard everywhere except at its upper part. It extended to the right of the middle line but gradually diminished in level. Nothing was felt in the posteri or fornix, nor in the right lateral fornix. The limits of the effusion in its upper part are shown in the annexed diagram.

During the previous night the patient had passed a large piece of thick membrane, like a decidua, one surface of which was shaggy and the other smooth. The pain decreased after the passing of this
and the pulse rate and temperature also declined, the former to 90 and 92 and the latter to 98° and 99° F.

On June 13th the swelling was found to be still harder and better defined but to be more marked than it had been on the right side, and it was also felt on examination of the right lateral fornix.

The patient was no longer able to remain in Hospital and I did not see her till June 26th, when I examined her in my Outpatient Clinic.

She was less anaemic than during her stay in Hospital and the lips and conjunctivae were redder. She complained of no faintness on standing.

The Mitral Systolic Murmur was still apparent and the pulse was 96.

There had been slight discharge up to June 23rd, i.e. the discharge continued for about a month, but there had been no further pain. On vaginal examination the cervix was found to be posterior and soft. The anterior fornix was less depressed than formerly.

Nothing was felt in the posterior fornix. Daintly a large swelling was felt filling
the pelvis and extending up to the umbilicus, just above the middle of Poupart's ligament on the left side is a small rounded body suggestive of the uterus. The rest of the swelling is of homogeneous consistency, tense and elastic. From the umbilicus it slopes down very gradually on the left side but more sharply on the right. The swelling is detected in both lateral fornices and on the right side it is more prominent than it was before.

I did not see the patient again but soon after the last examination recorded she was able to take a long journey and the last enquiries showed that she was in good health but still had some abdominal swelling.

The reasons for making the diagnosis of ectopic pregnancy have been mentioned. On admission that condition was regarded as possible; after 5 days the effusion had formed and the diagnosis was so far verified. Later on after another 3 days the decision was passed and I considered that the case admitted of no doubt. Peritoneal pain had recurred throughout that time.

There was haematocele, uncomplicated
Haematocele are not usually connected with amenorrhoea and pigmentation.

The membrane passed might have been the result of abortion or molar pregnancy, or a membranous dysmenorrhoea, but these theories were all rendered improbable by the internal haemorrhage. Careful examination of the decidua also showed a large and thick homogeneous membrane without differentiation into vera or reflexus and not filled with clot, and there was no embryo. These facts excluded the possibility of abortion or molar pregnancy and the thickness and size of the membrane combined together with the symptoms of pregnancy excluded membranous dysmenorrhoea. The haematocele also led the mind away from other causes to eclampsia pregnancy, which is regarded as the most frequent cause thereof (vide Sait op. cit. p. 160, Webster op. cit. pp. 144 & 145, Bland Sutton op. cit. p. 260, Cullingworth op. cit. p. 8). The peculiarity of the case was the anterior position of the effusion.

Case II. This was also diagnosed as one of
early Tubal pregnancy resulting in Haematocele. I saw her first in consultation and afterwards treated her in my Outpatient Clinique.

History. She was aged about 20. She says that 9 months before the date of examination she was confined of a child that lived 3 months. Menstruation did not appear until the lapse of another 3 months and it has been irregular, as the second period was delay-
ed a fortnight, scanty and slightly painful, the third came before its time and was scanty and very painful, the pain was exacerbating on walking and she felt faint. She com-
plains of loss of appetite such as she has when pregnant.

There is a slight constant discharge, which lasted from March 17th to April 3rd 1896. She was given Ergot with no effect but Hydrosi cus canadensis eventually stopped the flow. There was constipation, unless an enema were administered but there was pain on passing the motion, even after an enema.

Examination. Per vaginam. The cervix was low down in the vagina, soft and
directed anteriorly. The uterus was posterior and connected with a large irregular swelling, reaching up to finger's breadth below the umbilicus and depressing the right and posterior fornices. This was hard and firm far out on the right side but between that and the middle line it fluctuated.

Progress. The swelling spread somewhat to the left but afterwards gradually decreased in size. The periods were painful and protracted. After 3 months the cervix was found posterior on examination, the os petulans, the uterus anterior and small. The swelling in the left fornix smaller and almost gone, that in the posterior fornix lumpy and on the right side there was still a large rounded swelling the size of an orange, far out. After another 3 months it was felt only as a hard irregular swelling on deep pressure.

Diagnosis. The amenorrhea followed by irregular discharge, pain and faintness point in the direction of a tubal pregnancy rupturing and the constant discharge and large irregular swelling bulging out the front of Douglas and
filling the right lateral fornix point to an effusion of blood such as is found with Tubal Abortion and Pelvic Sorematoma.

No membrane however was known to have been passed and no mention is made of the condition of the breasts, so that a conclusive diagnosis cannot be made in this case.

Case III. A woman of about 30 years of age, was admitted to Hospital in 1870 complaining of an abdominal swelling with fever and diarrhoea. Previous History. She had had 8 pregnancies, but only one child of the first was now living, the rest having been abortions, stillbirths or followed by early death of the child. This was probably due to Syphilis. The last confinement was a year before this illness. Present Illness. She missed one period and considered herself pregnant. She also says that she noticed a swelling appearing in the right iliac region. After an interval, the length of which was not ascertained, menstruation reappeared and was accompanied by sudden faintness. A febrile condition followed, and for a week she had faintness.
and much pelvic pain; the swelling in the abdomen increased in size and was then soft at first and afterwards hard. Diarrhoea followed. After three weeks she entered hospital.

Examination. The cervix uteri was found very high up and driven against the pubes; the anterior fornix was obliterated, the os uteri was directed antero-ically. The pelvis was occupied by a large swelling which filled both lateral fornices, bulged into the posterior fornix depressed it and extended up nearly to the level of the umbilicus. The outline of the swelling was rounded antero-posteriorly and from side to side, and in the middle of the abdomen was felt a rounded body like the fundus uteri in shape but somewhat within the swelling. The swelling was more prominent on the right side than the left.
Progress. The diarrhoea from which the patient suffered stopped on entering Hospital; enemata were administered which brought away stomach. The treatment adopted consisted of hot vaginal injections and fomentations and a mixture containing Potassii Jodidum.

After a month the greater part of the effusion was found to be absorbed, the cervix was in its normal position and the fundus uteri was felt just above the symphysis pubis but slightly to the left of the middle line.

Diagnosis. The features in the case that point to there being a Tubal Pregnancy are the Amenorrhoea, the impression of the patient that she was pregnant, to which consideration some slight weight must be lent, especially as she was a multipara; the swelling noticed in the right iliac region; the sudden appearance of a large effusion in the lower part of the abdomen accompanied by faintness. The fundus uteri was thought to be just below the level of the umbilicus, which would necessitate its being larger than normal, even after allowing for the effusion pushing it
upwards and forwards; during the progress of the case it was also noticed that the fundus was considerably below the upper level of the swelling, although the position of the cervix was scarcely altered; this would point to the involution of the uterus going on satisfactorily and not being interfered with by the large effusion.

On the other hand, the direct measurement of the uterus by the sound was not taken and no history is recorded of the passage of anything like a decidua.

Objected may be made to the appearance of a swelling in the right iliac region before the second month of pregnancy as being improbable; supposing the word of the woman to be correct, that there was such a swelling after only one month's amenorrhea, it may be remarked that possibly the pregnancy was of more than one month's duration as it is often noticed that menstruation occurs during the first month of pregnancy; irregularity is specially noted in ectopic pregnancies. Even though the gestation were of less than
two months duration, the swelling may be explained by the statement made by Webster (op.cit. p. 160) "In tubal gestation, owing to the higher position of the tube, the pregnancy may cause a bulging of the abdominal wall at a period when, in normal cases, it would not do so, from being still below the pelvic brim."

The Amenorrhoea and the character of the effusion point to its being an effusion of blood rather than one due to peritonitis or oedema; the shape of the lateral masses and the marked roundness was like an effusion into the broad ligament, but the rounded bulging into the pouch of Douglas made it evident that the effusion was intraperitoneal, according to Faid's statement (op.cit. p. 468) "The effusion of the intraperitoneal haematocèle, contained in the rounded cavity of the retro-uterine cul-de-sac, bulges into the vagina like a dilated bag."

The diagnosis made was therefore Pélure Haematocèle due to salpingo-pregnancy, but whether to rupture of it or to tubal abortion it is not possible to say.
Case IV. This patient was treated in the Outpatient Clinic in 1874.

History. She was about 28 years old and had had one pregnancy which terminated in abortion.

Present illness. She considered herself 4 months pregnant. During the first month she was quite well, during the second she complained of much pain in both iliac regions and great pain on defecation, during the third also there was iliac pain. In the middle of the fourth month there came a discharge which was very painful and she fainted. Something more solid came with the haemorrhage and was passed in little bits; she thought it was a clot. She now has much pain on defecation but none on micturition and there is also pain in the hypogastric region and the back.

Examination. The patient is very weak and pale; the pulse is rapid and there are haemie murmurs in the neck.

Per vaginam. The cervix is anterior and rather hard; the posterior fornix is filled with a large swelling rather soft and with marked pulsation over it. There is a hard swelling in the right fornix felt also by the
outer hand on bimanual examination and tender to the touch.

Progress. After another week she returned saying that all the pain was less. The swelling in the posterior fornix was possibly even larger, as it was felt more to the right than previously. The uterus was felt to be small and pushed anteriorly. The patient did not return.

Diagnosis. This again was probably a case of Pelvic Haematocole due to the termination of an ectopic pregnancy. The presumption of pregnancy may be justified by the Amenorrhea for 3 months, the ectopic character of it by the iliac pain and the critical event after 3½ months, which exhibited the signs of internal haemorrhage viz. pain, fainting, anaemia and rapid pulse. The passage of a membrane in shreds is at least possible. What actually was passed was not examined. Whether there was rupture of an ectopic pregnancy or Tubal abortion it is difficult to say but the pain in the iliac regions for over 2 months with pain on defaecation, probably due to some obstruction such as a Haematocole, and culminating in great pain,
and painting and a large but limited effusion with uterine discharge are in favour of its being a Tubal Abortion.

Case V. This patient came under observation in February 1897.

Previous History. She was a nullipara, of between 35 and 40 years of age and had menstruated regularly from puberty till the close of 1896.

Present Illness. Then she had Amenorrhoea for 2½ months; this was not quite complete, as there had been occasionally a very slight coloured discharge. She had constant nausea with occasional vomiting and the breasts became enlarged. She naturally concluded that she was pregnant. After this 2½ months, she was seized with severe pain in the right iliac region with profuse discharge and she fainted.

I saw her 2½ weeks later and she complained of frequent giddiness, of discharge which was sometimes clotted and of pain on defaecation and also down the right thigh.

Examination. The abdomen showed no striae gravidarum or linea nigra; there was
a swelling felt in the lower part and slightly to the right.

Preliminary: The cervix was found pointing backwards but pushed anteriorly and soft, the os was patent. The uterus was anterior and in the swelling felt on abdominal palpation; there seemed to be some swelling also in the broad ligaments on each side of it but of very indefinite character: the upper level was about three inches above the Symphysis pubis. The posterior fornix was much depressed by a large swelling which bulged both towards vagina and rectum; this was rounded and hard, continuous with the cervix and about the size of a turkey egg: it projected so much towards the rectum that it nearly obliterated that canal. Thus there was much straining on defecation: at the commencement of the illness she had not been able to urinate so that the catheter had been necessary.

The breasts were no longer distended and contained no milk. The treatment ordered were hot injections, application of Argenatum Sodi to the ab-
-amen and Potassii Sodidum internally.

Eau-mates were to be administered if necessary to as to prevent the stools being unduly hard.

Progress. After a week I saw her again and found an improvement in every respect—appetite, sleep and pain. She says the discharge lessened after the passing of some thin shreds which were foul smelling and which were stated by other women to be like the membranes passed in an abortion.

On examination I found the cervix harder and the os no longer patulous, the abdominal swelling had decreased in hardness and thickness but that in the pouch of Douglas, while less than before and pressing less towards the vagina, was not much decreased.

Diagnosis. The circumstances of this case that led to the diagnosis of Septic pregnancy as its cause were the Amenorrhoea, in a woman who had been invariably regular for at least 20 years, the fact of the Amenorrhoea not being quite complete, the nausea, vomiting and enlargement of the breasts, the probable enlargement
of the uterus and the history of the haematocele passed, which were said to be like the membranes in an abortion.

The physical signs and the symptoms pointed to an effusion pressing on the rectum, probably a haematocele in the pouch of Douglas caused by the passage of a tubal abortion. This again is in accordance with the statements of Sutton (op. cit. p. 257) and Pullingworth (op. cit. p. 22) that a discharge usually indicates tubal abortion and that there was an intraperitoneal discharge as well as the vaginal is indicated by the presence of the large haematocele.

Case VI. This patient was treated in the Out-patient department in 1897 and came complaining of severe pelvic pain and weakness. She was about 25 years of age and had had 2 children, the last of whom had been born 2½ years at the time of her illness; both were dead.

Present illness. She states that she had amenorrhoea for 3 months; there was slight pain in the hypogastric and both iliac regions during that time. At the end of that
She was seized with severe pain followed by fainting, dizziness, great thirst, cold sweats and vomiting, and for 2 days she experienced much pain in the limbs. That pain lasted a week, after which she had a dark-coloured discharge for 5 days; then she passed two pieces of skin-like substance and, after that, the discharge continued for another 4 days. This discharge stopped about Sept. 8th 1877. She noticed then that the abdomen was swollen and the lower part was hard and painful. She had suffered from nausea during the 3 months of amenorrhoea; there was some enlargement of the abdomen and also of the breasts.*

Examination. She was first examined on September 22nd, about a month after the onset of her symptoms.

Abdomen. The linea nigra was found very faintly marked. There was a fullness in the lower part of the abdomen and dullness on percussion was elicited over that area, viz. up to 1 finger's breadth from the umbilicus. Nothing was detected on auscultation.

Per vaginam. The cervix was rather soft
and was directed downwards and slightly anteriorly. A swelling was felt extending from side to side of the abdomen, of homogeneous consistency and not very hard. The finger in the anterior fornix passed behind this swelling on the middle line and on the left side. On the right side there was a large swelling extending out to the ilium, the lower part of which was concave.

A tubelike body was clearly felt passing outwards in its posterior wall. The upper edge was of harder consistency in one spot. The uterus was not well felt owing to the tenderness experienced on examination; it did not appear to be enlarged; its posterior wall was felt through the posterior fornix, but there were many tight bands detected there. There was no swelling in the pouch of Douglas.

Per rectum, the conditions mentioned were felt more clearly but, there being much feces, the uterus was again not well defined.

Progress. She continued pretty well from the 22nd till the 25th, when she complained...
of a sudden sharp pain in the hypochondrium, which came on during micturition and spread over the whole abdomen. I was summoned to see her and found her lying on her right side, with her legs drawn up, quite still, very pale and with her hands quite cold. The pulse was 140 and exceedingly small. She had vomited her breakfast which was indigested. On examination the abdomen was found generally distended and no pressure, not even the slightest, could be borne; the hardness across the lower zone was marked. Per vaginam there seemed to be no change. She had been constipated for 3 days and an enema was therefore administered but it was retained.

There was no marked thirst, fainting, dyspnoea, perspiration, sighing, buzzing in the ears or restlessness. The pulse did not alter much in rate or character. Hot fomentations were applied to the abdomen and the pain rapidly diminished. She was under the constant supervision of the nurse. In the afternoon there was a decided improvement in her condition.
The pulse becoming stronger, though still beating at the rate of 132 per minute. There was no restlessness.

Next day she was much stronger and the pulse was 112: the day after that, she was about the same: there appeared then a slight discharge which lasted two days; as it corresponded in time to the menstrual period it was taken to be that.

On October 14 (i.e. after nearly 3 weeks) she was examined again: her general condition was much improved and she was stronger and stouter. There was now no enlargement of the breasts and no visible swelling of the abdomen.

Per vaginam: the cervix was rather soft, was directed posteriorly and the os was patent. The body of the uterus was felt directed posteriorly. In the anterior fornix was felt the swelling alluded to before as extending from side to side but diminishing in thickness to the left. On the right side the swelling still reaches out to the ilium and is rounded and about the size of a large goose-egg, homogeneous in consistency and with a tubular body passing along its
posterior wall and then curving over to the left side. The lower part of the swelling was no longer concave and did not fill the right lateral fornix but the rounded swelling alone is felt.

On October 25th (i.e. after another 10 days) the cervix was found directed posteriorly and in the middle line. The uterus was posterior. The swelling was less than before and altered in shape. On the right side a swelling of about the thickness of 2 fingers was felt lying on the middle line and extending out to the ilium, near which it became thicker and harder; it there curves and comes forwards as a rounded swelling but less tense than the other part of it; it then continues on to the slight thickening which extends anteriorly across to the left side. Its shape is like that of a dis tended and curved tube.

There is much borborygma at its iliac extremity.

On November 3rd (i.e. after another week) the cervix was found anterior and the uterus directed posteriorly and attached to the
Swelling. The swelling on the right side is the same as before and something very like a normal tube was felt running along its posterior wall. There is a little fullness felt in the left lateral fornix and the left uterosacral ligament is somewhat tense.

In November 10th (after another week) the uterus was found directed more to the right side and continuous with the swelling in the right fornix which is still rounded and distended but tapers off towards the ilium. It is still about the size of a large goose egg. There was no pain on examination.

On December 3rd the physical signs were much the same. The patient by this time had been apparently well for a month and was quite able to walk about without fatigue.

Diagnosis. The diagnosis come to was that of Pelvic Pregnancy terminating after 3 months in rupture and haematoma in the right broad ligament and followed by peritonitis, but the patient not having been seen until she had been ill a month renders it difficult to be as certain of the diagnosis as one would otherwise be.
The points to be established are these: first, that the patient was pregnant; secondly, that her pregnancy was ectopic; and thirdly, that she was suffering from haematoma and peritonitis. The pregnancy is rendered probable by the amenorrhea for 3 months accompanied by some increase in the size of the abdomen and the breasts, and by nausea.

That it was ectopic is suggested by the symptoms. An abortion might give rise to all the physical signs which were obtained: it was so long after the passage of anything of a membranous character before the patient came under observation that no argument can be founded on the want of enlargement of the uterus; the uterus might have diminished to the size found on examination in the interval that had elapsed had the patient had an abortion. But the symptoms complained of were such as a simple abortion would not explain while they were precisely what are met with in rupture of the sac of an ectopic pregnancy, with the effusion of a large amount of blood. The pieces of skin-like substance passed were of course
not been and thus cannot be described but they are suggestive. Their presence, together with the symptoms seen, points to eclampsia pregnancy with the passing of the uterine decidua: they might be parts of a caruncular mole or there might even have been an amenorrhea passed unnoticed but the sudden onset of symptoms of internal haemorrhage would not be explained by that hypothesis and moreover the discharge of blood did not take place till after the onset of the symptoms of internal haemorrhage mentioned.

3) The blood effusion was taken to be a haematoma rather than haematocele because of its lateral development and its concave lower margin as well as its well-defined form. The attack which I was summoned to witness seemed to be of a different character to the previous one; the palor and the state of the pulse pointed to a fresh haemorrhage but the other symptoms of such a condition were entirely absent and there was no sign of such obtained on subsequent examination. It may be possible to explain it on the supposition of a sudden sharp haemorrhage which stopped very soon or of peritonitis.
due to the constipation and started by undue vomiting during micturition.

The form of the swelling is an interesting feature of the case; at first it was impossible to detect any particular shape owing to the general swelling occupying the whole of the right portion out to the ilium. But on the absorption of some of that swelling, there appeared to be a rounded cystic swelling occupying a part of the Fallopian tube, something resembling a tube was just felt behind the swelling and afterwards a long thickened body leaving the upper angle of the uterus was found continuous with the swelling in question. The shape of the swelling suggested a distension of the Fallopian tube rather than a peritoneal effusion or tumour of the ovary or parovarium and the history would point to its being a Haematosalpinx.

Bellingsworth (in "Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation" pp. 32, 35 and 38) gives cases diagnosed as of Tubal Gestation in which Haematosalpinx was found combined with intra-peritoneal effusion of blood and in this case the same may have occurred combined.
with extraperitoneal effusion.

The borborygma detected far out in the swelling is likely to have been due to the involvement of part of the bowel, probably near the vermiform appendix or cecum, in the adhesions resulting from the peritonitis. This case would be more easy of explanation if the effusion could be held to be intraperitoneal but the concave lower margin felt on the first examination is characteristic of the extraperitoneal variety of haematoma.

(Tail, op. cit. p. 468).

Case VII. This patient was treated in Hospital in 1894. She was not under my charge but I had the advantage of examining her occasionally and of making use of my colleague's notes. She was about 25 years of age and had had one child some years previously.

Recent illness. She had 2 months amenorrhoea, after which the periods returned but irregularly. This increased until it was profuse and dark-coloured. On entering hospital a membrane was passed, which was not however described, but no embryo was seen.
After that, there was severe paroxysmal pain in the lower part of the abdomen with pain and tingling extending down the left leg to the foot.

Examination. Per vaginam. The vagina was felt to be hotter than normal. The cervix was directed posteriorly and the os uteri was not patent. Any pressure in the fornices was impossible owing to the pain but an indefinite swelling was made out all across the abdomen above the pubes.

The breathing was markedly costal and there was dyspnoea.

The pulse rate was 104, the respiration 36 and the temperature about 100° F.

Progress. Next day (July 28th) the dyspnoea was better, there was severe paroxysmal pain, the swelling and tenderness had increased. The pulse was 112 and the temperature between 102° and 100° F.

29 July. The pulse was between 100 and 112 and the temperature between 99° and 101° F. Then followed a hectic temperature lasting for a week and varying between 99° and 102° F with a pulse usually about 90 but on one day
reaching 102. The paroxysms of pain continued.

August 10. Per vaginam. The cervix was large and hard, the uterus very large, hard and painful. There was a very tender back swelling in the left lateral fornix.

A hectic temperature again intervened from the 12th to the 26th of August.

Aug. 19. Per vaginam. The cervix was rather large and directed anteriorly and the os uteri was not patent. A considerable swelling was felt in the posterior fornix and in the left lateral fornix was a large rounded solid mass extending up to 2 fingers from the umbilicus and nearly out to the ilium. The movement of which communicated movement to the cervix. A soft swelling very tender on pressure was felt in the right lateral fornix. Nothing was heard on auscultation.

Aug 25. The swelling on the left side extended to 3 fingers breadth from the umbilicus in the middle line and tapered down towards the left ilium. There is a swelling on the right side but it is less and falls more steeply than on the left and it is soft at the lower parts. The top and the right side of the swelling
are especially painful.

Portuguese. In the right fornix is an indefinite swelling, soft and tender, and with a markedly pulsating vessel. In the posterior fornix is a body connected with the cervix and facing backwards and towards the right side, probably the uterus. On the left side is a large, hard swelling from which a long, hard process runs downwards and to the left, which probably accounts for the pain experienced on defecation.

August 28th. The upper limit of the swelling was now at fingerbreadth from the umbilicus, the right side was scarcely altered but the swelling on the left was very much diminished, a good deal of irregular thickening was felt there but the examining fingers could nearly meet on the left side in front of the swelling on bimanual examination.

By a month after this date the swelling was stated to be all gone and the condition practically normal again.

Conisation was a marked feature of the case, the balls being only moved every other day by ocular.
Diagnosis. The diagnosis of this case was preponderantly decided by the denial by the patient of any possibility of pregnancy.

The membrane passed was not sufficiently examined to allow of any statement as to its likeness to that of membranous dysmenorrhea, but it is stated that no embryo was seen.

There are no symptoms of pregnancy recorded and the state of the breasts and presence or absence of linea nigra are also not mentioned.

The diagnosis rests between a peritonitis and a haemorrhagic effusion, the rapid termination by absorption precluding the possibility of cellularity.

The paroxysmal pain experienced throughout so long a time as a month and the presence of an effusion which was soft in part is more suggestive of haemorrhage than a peritonitic origin. The paroxysms were probably due to fresh haemorrhages occurring or to contractions going on in the tube and the rise of temperature is in accordance with Tullingworth's statement quoted above (Sudlow's Textbook of Obstetrics, p. 28).

The effusion was most probably haematoma of the left broad ligament and spreading slightly to the right, the pouch of Douglas was
not occupied by effusion but the there was also a band of effused matter felt at the side of the rectum: this was however a band and not the annular ring spoken of by Tait (op.cit. p.416).

Apart from the word of the patient to the contrary this case would be diagnosed as one of Tubal Gestation terminating in extra peritoneal rupture between the layers of the left broad ligament and causing haematoma.

Case VIII. Only one case has come to my knowledge in which an ectopic pregnancy proved fatal at an early stage. The notes were supplied by a colleague who saw her in consultation.

The patient was a multipara of 25 years of age and had not been pregnant for 4 years.

Present Illness. She had Amenorrhoea for 3 months and considered herself pregnant. She noticed a swelling appear in the right iliac region and there was slight pelvic pain occasionally. After the 3 months she was seized with sudden faintness, a
slight discharge appeared and the swelling was no longer noticed.

After a week, during which the painlessness continued, she passed what appeared to be a membranous substance, and after that the symptoms rapidly became worse.

Next day on examination she was found collapsed, with rapid thready pulse, no rise of temperature externally but increased temperature on vaginal examination: the vagina was soft, also the uterus; there was a boggy feeling in the fornices and dulness on percussion over both iliac regions: the rest of the abdomen was tympanitic.

She died on the same day i.e. 8 days after the onset of the symptoms.

Diagnosis. The symptoms are indubitably those of septic pregnancy terminating in a fatal haemorrhage. Whether the haemorrhage originated in rupture of the tube or in tubal abortion it is impossible to be certain about. The occurrence of the fatal haemorrhage a week after the onset of the symptoms is in accordance with either hypothesis, as the fatal rupture of a tube is sometimes preceded by a
slight rupture or the gestation sac itself may plug the rent and stop the haemorrhage for the time (Webber, op. cit. p. 62), if that were the condition in this case, the disturbance caused by the uterine contractions in passing the decidua would be capable of inducing fresh tubal haemorrhage. The discharge in this case however is in accordance with the statements of Bland Sutton (op. cit. p. 257) and Follingworth (Tubal Gestation, p. 22) connecting that with a Tubal Abortion but the duration of pregnancy viz. 3 months is later than the limit given by Sutton (op. cit. p. 257) which is 2 months. Therefore it may be supposed to be a case of Tubal Rupture, ending fatally with the characteristic train of symptoms.

Case IX. The next case gives the history of a patient from the time of rupture to about the middle of gestation and will be dealt with at some length.

The patient was a multipara, aged about 28 years, and came under observation in March 1895.
Pelvic History. The patient had suffered from prolonged pelvic trouble starting with a flooding occurring six years before. She describes this illness as consisting of a very profuse period accompanied by giddiness and much abdominal pain. She was treated in a Hospital and recovered but the pain continued. This illness left a weakness on walking and from that time she had premenstrual dysmenorrhoea in both iliac regions accompanied by flatus and distension. The period itself used to last a week. It was dark in colour and occasionally profuse and was followed by a slight coloured discharge. This illness may have been either pelvic Haematocoele, Haematoma or Peritonitis; if either of the former it may even have been due to previous ectopic pregnancy. It probably induced some such conditions as pelvic adhesions, inflammation or distension of the Fallopian tubes or inflammation of the ovaries and endometritis, either of which would account for the patient's sterility. It is possible that the original illness may have been an early abortion followed by
Peritonitis.

History of Present Illness. The last period before the present illness was early in March 1896; it was rather scanty and she felt faint. After a week there was slight discharge again, dark in colour, with a bad smell and preceded by severe pain.

After another week there was again severe pain felt in the hypogastric and accompanied by a feeling of fullness in the epigastric and vomiting; the vomiting occurred at the scene of the pain and left her very weak and chilly and perspiring profusely. Soon after the onset of this pain she noticed a swelling appear in the right iliac region and during this week after it; appearing, which was the length of time that elapsed before she came under observation, she experienced general pelvic discomfort and paroxysmal pain, pain in the hypogastric or defecation, as feeling like prolapse on micturition; there were also fullness in the epigastrium, increased size of the abdomen, vomiting and slight diarrhoea discharge.
These symptoms led her to become an in-patient and she was henceforth under constant observation during the 5½ months from the end of March until her death on July 14.

On her entrance to hospital there was not much to indicate the existence of pregnancy and for two or three weeks the true nature of the case was not even suspected.

**Examination per vaginam.** The cervix uteri was found to be long, rather hard and directed anteriorly, and there was found on bimanual examination a large rounded hard swelling in the right iliac region coming up to the middle line of the abdomen and encroaching on the vagina; the cervix appeared to be continuous with this swelling. In the left fornix posteriorly there was felt another hard swelling and both swellings were painful to the touch. Therefore, as the patient was not examined under chloroform, it was impossible to say whether these swellings were connected with one another or what precise relation they bore to the uteri. The uterus was not clearly detected on examination.

The provisional diagnosis made at the time
was Haematoma of the right round ligament with some peritonitic inflammation; and
treatment was directed to the relief of pain
and the regulation of the bowels.
Progress. From the patient's admission on March
23rd till the beginning of May when the diag-
nosis of Ectopic pregnancy was established, the
chief symptom was pain.
There was an attack on March 30, the pain being
felt all over the abdomen, causing rise in
pulse rate to 100 and rise in temperature to 100.6°
and preventing sleep. Next day it was much
the same and caused proptose, perspiration, it was
more on many movement involving the pelvis,
such as micturition, defecation or even the
passing of flatus. The pulse rate re-
mained about 100 but the temperature varied
between 97° and 100.8°. There was slight
coloured discharge from the 31st until April
and when the pain moderated perceptibly
and the temperature declined, the pulse
also went down to 88 on April 4th.
On the 14th there was a recurrence of this
peritonitic pain, with marked lymphocytes;
the pain was felt generally over the abdomen
but also shooting down the thighs and legs, probably owing to pressure on the nerve trunks in passing through the pelvis: the least movement of any kind increased it; micturition was painful and she could not bear the abdomen to be touched. On the next day a hypodermic injection of Injectio Morphiaca hypodermica was given, which lulled the abdominal pain but that in the thighs was worse. She had vomited once on each of these two days and the bowels were constipated. The pulse was again 108 and the temperature 100.6° F.

By the 17th the pain was much better but there was now pain in the groins: there was no more tympanites, the bowels had been well moved, the pulse was 90 and the temperature had sunk to subnormal. During this attack opiates and sedatives had been freely administered and Magnesia Sulphate had been given in doses of one dram every hour on one day to move the bowels: saline were also administered. There was slight discharge again on April 21st and from the 23rd to the 27th there was another attack of pain, with the pulse vary-
ing between 96 and 102.
From May 2nd to 6th also the pain was severe but in the thighs and not the abdomen.
During this same interval viz from March 23rd till May 6th there was also much change found on examination.
On March 31st during the attacks of pain, examination was found to be very painful. The anterior fornix was depressed and the swelling on the right side of the abdomen has increased in size reaching up to about 1½ inches from the umbilicus on the right side but spreading also over to the left where it reached 3 fingers breadth from the umbilicus: swelling was felt in the left broad ligament also.
On April 10th the vagina was found to be more encroached upon than before, the ovaries was more prominent but the swellings in the abdomen had decreased somewhat so that the upper limit on the right side was 2 inches from the umbilicus.
On April 14th during a bad attack of pain the abdomen was found to be very tympanitic even up to the epigastrum and it was then noticed that the pigmentation in the linea
nigra was more marked than normal; there was also increased pigmentation round the nipples.

On April 21st the abdomen was still distended but was soft. The swelling was now 2 ⅔ inches from the umbilicus in the middle line and extended on the right to the mammary line from whence it sloped down towards the ilium; on the left it did not extend so far. On April 25th on examination the breasts were found to be enlarged and the areolae darkened.

On inspection the abdomen showed a marked lined nigra and on palpation the swelling extended to 1 ¼ inch from the umbilicus.

Per vaginam the cervix was found softened and directed downwards and posteriorly. There was increased resistance in the anteroposterior but no marked swelling and the vagina seemed less encroached upon than before. The swelling on the right side was scarcely reached per vaginam but by bimanual it was felt to be larger, rounded and hard. Something was felt in the middle line like a soft uterus rather larger than normal. No swelling was felt on the left side.

The
abdomen was no longer tense and there was much less pain on examination.
A faint systolic murmur was heard in the mitral and pulmonary areas.
The patient complained of nausea and of alteration in her appetite for food.
By this time the diagnosis of the patient's condition had become clear. She was pregnant, as evidenced by the fullness of the breasts, the darkening of the areola and the linea nigra, the softening of the cervix, the rapidly increasing swelling in the abdomen, whose change of size and shape was evident on the weekly examination of the abdomen. She had also the nausea and altered appetite of pregnancy. That the pregnancy was ectopic was made practically certain by the fact that the swelling was on one side of the abdomen entirely and the uterus was never distinctly palpated even though the cervix was in its normal position. There had also been no amenorrhoea, but metrorrhagia. The patient had had several attacks of peritonitis with great pain and prostration, tachypnoea and rise both of temperature and
pulse rate.
Between May 7 and June 8 there were no fresh
symptoms but the physical signs underwent
considerable change.
In May 7 the upper limit of the swelling
was found to be 12 inches from the umbilicus
both in the middle line and on the right side
but on deep palpation it is felt to extend ac-
tually up to the level of the umbilicus. It
also extends more to the left side reaching
out to the mammary line, where it suddenly
ends.
The pericardium note is dull. Auscultation reveals
nothing.

The top of the swelling on the right side bulges.
somewhat and is painful. The lower limit of the swelling can only just be reached per vaginam.

The patient says she can feel slight move-
ments in the swelling. The swelling felt now more like an normal pregnancy, but that it was so much.

On May 17th the upper limit was unchanged, but
the swelling seemed to have sunk down more in the pelvis, being better felt in the anterior and right lateral fornixes. A slight bulge is felt be-
tween the right side and the middle line of the abdomen. No contractions were felt, neither
was anything heard on auscultation.

From May 22nd to 27th there was a further
attack of peritonitis with pain and discharge.
The pain commenced suddenly in the early
morning and was felt chiefly in the right
side region at the spot where the swelling
is hardest. The abdomen is a good deal
distended and tympanitic but not very
painful to the touch. There is again pain
on micturation and on passing flatus.
The patient lie on her back with the knees
drawn up. The pulse is between 108 and 120
and the temperature 99.7.

The pain
however decreased gradually till the 27th and the discharge stopped. The character of the discharge was dark and scanty.

On May 28th the swelling was found considerably increased in size as it reached the umbilicus in the middle line; a slightly higher level on the right and, on the left, it slopes downwards and as before suddenly ends at the mammary line.

On May 30th the cervix was found pointing anteriorly and the os was rather patent.

The uterus was anterior and the sound was passed into its cavity for more than the normal length – the exact measurement has been lost but it is believed to have been 3 inches. The posterior and right lateral
Fomites are determined by a soft body, but posteriorly a hard mass is made out in the
swelling.

On June 8th there commenced another
attack of pain with severe peritonitis; the
decidual membrane passed then and the
foetus is supposed to have died as no further
movements were felt by the patient and the
rapid increase in the size of the swelling gave
glass to slight decrease.

The pain was chiefly felt in the epigastrum
and down both sides; it caused distension and
symptomes. The pulse varied between 105 and
130, and the temperature rose on the 8th to
102.5°F and was remittent; 99, 100 and 102°F
being registered on the following days.

The pain was at its worst on the 9th and
the patient was then very weak; there was
constipation for 3 days, the enema having
no effect. She was put under the influence
of morphia again for this attack.

On June 10th there was some diminution of the
pain and foetal clot was passed in the discharge,
followed on the 11th by more clot and a little bit
of membrane and on the 12th by a large piece
of the uterine membrane, smooth on one side and shaggy on the other. The pain and abdominal tension was diminished to such an extent that the patient could again bear to lie with the legs extended. The pulse fell to 104 and the temperature to between 98° and 100°.

The bowels were moved 10 times and the diarrhoea continued for 3 days.

The patient said she had felt no movements in the swelling since the 8th; these movements had always been subjective but never felt by examina-
tion.

Some more decidua was passed on the 13th by which time the general symptoms were better, the abdomen was less tense, the tongue clean, the pulse 98 and the temperature ranging between normal and 100.4°F.

The pulse however went up to 120 and 110 again while the diarrhoea lasted.

On the 16th the diarrhoea stopped but the pulse was between 110 and 120 and the tem-
perature rose to 103.7°F. The epigastrium was less tense but in the left iliac fossa there was a swelling very much like that in the right.
Per vaginam the cervix was felt soft and directed posteriorly; the posterior and right lateral fornices were more depressed than they had been, by a rounded hard swelling which was clearly felt per rectum and was painful.

There was an attack of constipation from the 17th to the 19th during which there was increased pain, felt in the epigastrium, sides and hypogastrium; the pulse rate and temperature increased.

On the 20th to 22nd there was again diarhoea. The abdomen was less distended than it had been and there were fine wrinkles over its surface, a indication thereof: it was still tender to the touch but less so than formerly. The consistency of the swelling is variable, the greater part being tense and almost fluctuating but some parts being very hard.

The patient complained once or twice of headache and also of earache but otherwise there was more freedom from pain. The pulse and temperature however were constantly above normal, the former
being 96,100 or 108° and the latter ranging from 99° to 102.8°.

In June 29th on examination the cervix was found again anterior; a hard rounded swelling was felt depressing the posterior fornix markedly, and to a less extent the right lateral fornix; the abdominal swelling seemed more prominent and its upper limit was found 2 fingers breadth above the umbilicus on the right side. The temperature still retained its hectic character.

The patient's strength was showing signs of gradual failure and on that account and also on account of the nature of the temperature it was decided to operate.

The necessity of operation had been kept before the minds of the patient's friends for some time and their consent had been nearly obtained when the attack of peritonitis of June 8th occurred, with the passing of the decidua, after which it was decided to wait again until the placenta should have undergone retrogressive changes.

On July 4th therefore the patient was pre-
pared for operation but unfortunately she fell a victim to Chloroform poisoning soon after the administration of the Anaesthetic was commenced. Two draeams had been inhaled and the patient was asleep and the operation was about to commence but on her showing signs of movement again, a little more was given when she almost immediately opened her eyes very wide, the pupils dilated extremely and there were several strong upward movements of the eyes: the pulse ceased almost at the same time with or before the respiration and in spite of hanging the head over the table, nitrite of silver, artificial respiration, electricity, mustard etc. there was no attempt at improvement, the patient was quite dead.

Diagnosis: It is therefore impossible to state the exact nature of the operation in this case but the signs and symptoms point to a tube pregnancy in the right Fallopian tube rupturing into the broad ligament and causing swelling which filled the ligament and probably pushed the uterus over to the left side, which would account for the sharp edge of the swelling.
in the left mammary line. The gestation continued to grow in this position and its presence caused several severe attacks of peritonitis. Its growth illustrates much more.

Two statements by Webster (op. cit. p. 160) "In the majority of cases, the enlargement of the abdomen, especially in the few prior six months, is mainly produced," and (p. 159) "While in uterine gestations, after the uterus has begun to rise above the umbil,

there is a fairly constant progressive rate and method of distension of the abdominal walls, there is no such uniformity in ectopic gestations."

At about the 14th month of pregnancy (if it be taken for granted that the patient was already pregnant at her last period in March) the swelling ceased to grow as rapidly as before, jaundiced decisions were passed. There was a great deal of pain and prostration and the woman probably died then. There were no physical signs pointing to haemorrhage into the gestation sac at this time.

dead

The presence of the ovum however apparently
immediately set up, with ammatory changes of a suppurating character which gave rise to constant hectic fever. Probably owing to adhesion of the sac to the bowel there appeared towards the end a tendency to irritable diarrhoea which was difficult to control. There was a great similarity between this case and the first one described by Watt and Carter in "Laboratory Reports, Royal College of Physicians, Edinburgh," Vol. 1. In 46, the right iliac region being occupied by a large swelling in each and the utero being pushed over to the left. It was therefore expected that no peritonitis would be found anterior to the sac on operation, as the increase in size had been so gradual and the sac appeared to be quite in contact with the abdominal wall.

The patient was confined to bed during the greater part of her stay in Hospital but for a few days during May she was able to walk about.

The treatment adopted was entirely directed to the relief of symptoms as they arose: opium, stomechic sedatives, carminatives, tonic as
Syrauphiuii Phosphatis Co. Iuirine, Besniiti, Potassium cum Ofio being, among other medicines, given as occasion required. The vaginal douche, the application of hot fomentations and fumigation Belladonnae to the abdomen and administration of enemata were also carried out as required.

Operation in this case should have been performed earlier, as soon as the diagnosis was made of ectopic gestation, but various circumstances prevented its being carried out then and when the patient showed symptoms of the death of the child it was considered better to wait a little for the cessation of the circulation in the placenta.

B. Cases illustrative of the latter half of Pregnancy.

I have now to refer to seven cases illustrating the phenomena of the latter half of pregnancy.

Of these cases I was seen only in the Outpatient Clinique and a diagnosis made then. I was seen at full time but died before the time of the extended operation. I were opera-
ted upon and 2 were cases of suppuration, after the death of the poet two.

Case X. The patient was a primipara of about 24 years of age and complained of bad appetite and constipation. She was seen in 1841.

History of Present Illness. She said she was 8 months pregnant and gave the following history. After 4 months amenorrhea she had pain and profuse discharge and fainted after another week there was severe pain and fainting again; she is said to be still subject to fainting from the severity of the pain.

Examination. The examination made was rather cursory and leave much to be desired. It was feared that the patient would return for treatment in Hospital when a more careful examination would be conducted. As she did not do so, there is no option but to give these imperfect notes, which seem however sufficient for diagnostic purposes.

The breasts were found to be secreting milk.

Abdomen. Inspection. The abdomen was much enlarged but the enlargement was not by from side to side and not medial; it extended
up to the epigastric region. The abdominal walls were exceedingly flabby, there were but few true gravitations but the linea alba was very well marked.

Palpation revealed a swelling in the lower part of the abdomen; this extended nearly up to the umbilicus and was dense in consistency, but its exact position and relations are not given; there was also in the right side foetal a hard round body which was moveable, but its size is not stated nor its relations to the dense body.

In the upper part of the abdomen was a child, whose movements were extremely free and forcible. The body of the child was in the left hypochondriac and lumbar regions; a limit was felt in the right hypochondriac region, whose movements were apparently unlimited, it came down to the left lumbar region and passed back to its former position in such a manner as to cause much suspicion that there was no uterine wall to confine its range of mobility. The abdominal walls also were not thin but the part of the child were very easily made out.
Auscultation. The foetal heart was not detected but a sound was heard a little to the left of the middle line between the umbilicus and pubes.

Per vaginam. The cervix was found softened.

Diagnosis. The diagnosis depended on the consideration of the history, the contour of the abdomen and the movements of the child.

The history was an almost typical one of rupture of an ectopic pregnancy; the date (ovulation 7th lunar month) is late for the rupture of a uterine pregnancy. Salt (op. cit. p. 453) gives 4 to 12 weeks as the usual time. Webster (op. cit. p. 37) gives 8 to 14 and Sutton (op. cit. p. 297) says before the 12th week. It is quite possible that the patient may have given the date erroneously. In the record of the examination, the position of the uterus and the limits of the swellings observed are not stated. The dense swelling reaching nearly up to the umbilicus was probably the placenta as the uterus in an ectopic pregnancy rarely attains such a level. Webster (op. cit. p. 162) gives an average measurement of about 5 inches as the length of the uterus.
The contour of the abdomen was not of the compact character usual in first pregnancies but it was broad from side to side, agreeing again with what Webster says (op. cit. p. 160) that "instead of the longest diameter being vertical, it is generally oblique anteriors.

The broadness however was not that if a transverse presentation as the child appeared to be entirely above the umbilicus and there was nothing detected like a uterine wall surrounding it. This however is not a diagnostic point as will be shown later in dealing with a case for differential diagnosis.

The movements of the child above seemed at the time sufficient to show that its position was extra-uterine. These movements would require a very capacious uterus indeed if the child were in the uterus but such a uterus is rarely met with in primipara except there be such a cause as Twins or Hydramnios, both of which were excluded here as the child was felt with great ease.

The diagnosis of advanced ectopic pregnancy which was made then was confirmed by
enquiries made after, which showed that 5½ years after the birth of the patient she was alive and well and had not yet been delivered. Towards the end of 1876 however, i.e. 6 years after the examination made, it was ascertained that she became very ill and suffered from pelvic pain and progressive emaciation. An abscess ruptured into the genital tract so that she passed pus per vaginam and also many bones. After this she gradually recovered her strength. The speedily wide range of movements in this case are in favour of the view of the sac containing it being very thin and suggest it belonging to the tubo-peritoneal variety of trophic pregnancies.

Case XI. The patient was about 35 years of age, seen on June 21, 1896 and complained of severe labour pains. She was very worn looking and thin: the skin was hot and the pulse rate was 112 per minute.

History. The patient had been under my care in Hospital 2 years previously and the condition then diagnosed was
Chronic Cataract of the Cervix, Retroversion of the uterus, left-sided salpingitis and at one examination just before the period there was also prolapse and enlargement of the right ovary. She was under treatment for nearly 2 months and there was improvement in the condition of the cervix; the uterus which was very large, doughy, pain ful and immovable became smaller, less doughy, painless and almost replaceable. There was felt a large thickened curling Fallopian Tube in the left fornix.

There were 2 periods while she was in hospital; the first was accompanied by a good deal of pain and was scanty at its onset. The second was normal.

She had had 4 pregnancies: the first 3 were miscarriages and the last was in 1890, 4 years previous; that child is living. Present Illness. Her last natural period was in September 1895. Then the next period became due she painted and was very ill and weak for 4 days and there was some slight pain on the right side. She got medicine with a view to
bringing on the catalema. This came a fortnight late and was very scanty, being natural for one day and then giving place to a very slight coloured discharge.

She suffered from constipation and flatulence at this time and has continued to do so throughout her pregnancy. She was examined by a native doctor during the last month and he considered the question of pregnancy doubtful as the uterus did not increase sufficiently in size. The cervix was very high up and directed to the left side, but he made no note of any tumour in the pelvis. The question of pregnancy was settled only when the movements of the child were felt; latterly these have been excessive. The patient has not been able to lie on the left side for many months. There has been at times difficulty in respiration and recently the constipation has only yielded to the daily use of enema.

The movements of the child increased in vigour during the day on which I first saw the patient; they were felt chiefly in the left hypochondriac.
The pain complained of now is felt both in the sacrum and hypochondrium and is rhythmical like the pains of labour.

Examination (under Chloroform)

Abdomen, Inspection. The abdomen is much increased in size but of a flattened shape being more barrel-shaped than an ordinary pregnancy, and especially increased in the upper zone.

Percussion. The right hypochondrium and epigastrum were found to be tympanitic but the left hypochondrium, lumbar and iliac regions, the hypogastric and right iliac regions were dull on percussion.

Palpation. There is a hard mass felt occupying the whole of the left side of the abdomen but palpation did not on that day reveal it very clearly. 2 days later the part of the child was felt extremely firmly the breech in the left hypochondrium, the knee very distinct, the right elbow near the umbilicus. The child moved very much indeed but there was no movement at all on the right side of the abdomen. In the hypogastric region and slightly to the
The uterus was felt very plainly and undergoing frequent contractions; in fact, the contractions were distinctly visible as the uterus bulged the abdominal wall.

Auscultation: The foetal heart was detected in the usual position on the left side midway between the umbilicus and the anterior superior spine of the left ilium; its rate was 140.

Per vaginam: The cervix was found high up and push behind the pubes; the os uteri was soft, dilated to the size of half a crown and directed downwards.

On passing the finger into the os uteri it was found to enter rather higher than...
the jubes and to go in the exact direction of the uterus as felt manually; nothing was detected inside it. The uterus itself was larger than normal but of the shape of the unimpregnated organ: there was no sound to measure it with.

The posterior vaginal wall was much bulged out by the child's head which also stretched the posterior lip of the cervix and the head was felt behind the posterior wall of the cervix but with the cervix tissue between it and the examining finger. Per vaginam and per rectum the head was felt very distinctly and its sutures readily made out; it came down to about 2½ inches from the osutum vaginæ and was pushed down somewhat during the pains; it nearly blocked the rectum altogether.

Progress. The treatment adopted for the pain was Opium, a Morphia suppository being given for the spasmodic and a Carminative for the flatulent distension. The patient soon got under the influence of the Opium and the pain decreased until
the 25th (i.e. 4 days). The temperature also decreased and the perineum sank to 84. In the 24th there was passed a piece of thin membrane, one surface of which was rough and the other smooth; it was slightly foul and its size was what might cover a third of the uterine surface. Another piece was passed on the 28th and was fated.
The child's head was felt on the 33rd and about one inch from the uterine vagina. The movements of the child appear to have been very marked on the 25th but from then until July 10 they are recorded as being very faint and they do not seem to have been felt after that date. From June 26th the condition of the patient was rather worse, probably owing to the amount of opium taken; the tongue and lips were dry and speech indistinct; there was much flatulent distension, especially on the right side of the abdomen. An enema was administered which brought away dyspsia. The patient after this was able to lie on the left side, which she had not done for months.
The fever was then stopped, and only reserved for exacerbations of pain. On the 29th she complained of flatulent distress, immediately on taking food, so that she took very little nourishment. On the 30th diarrhoea began and lasted till July 5th: at first it was cholera and afterwards much mucous was passed. On the 2nd July there was slight headache. The tongue was very dry and coated with a thin black film: there was slight hic-cough.

The symptoms underwent fluctuation during the month of July, being now worse and now better. From the 4th till the 11th there was pain and dryness in the throat: the pain being so bad on swallowing that she refused food; she said that there seemed to be such a rising in the epigastrium also when food was offered her that she could take none. Nux vomicae were therefore administered. When the throat got better there was pain in the chest, which referred to the aetophagus.
The sleep also was very bad at night but she slept almost the entire day. These symptoms were very similar to those seen in many cases of influenza, which was epidemic at the time and from which the other members of the family all suffered, and I attributed them to that cause, although the initial symptoms had not been clear. The existing weakness of the patient made the super-addition of any other ailments a serious matter.

On the 14th the rectal feeding was stopped; on the 18th the patient complained of distension after food, so that the liquid nourishment formerly given was stopped and a little solid given.

There was constipation also about this time, which was relieved by enema but on the 24th there was diarrhoea again. On the 25th she vomited one worm and passed another in the stools. A small dose of antimonials was administered, followed very shortly by St. Phcinti and Myr Tri opii. She vomited soon after taking the Oil and during the 28th the vomiting was constant.
She refused food and became very rapidly weaker, very soon assuming the aspects of extreme exhaustion. Strong stimulants were given but she died early in the morning of July 29th.

The physical signs noticed after the death of the child consisted chiefly in a consolidation of the sac occupied by the child, an extension of the child rather to the right of the umbilicus so that part could be felt there, and also an increase in size and hardening of the swelling noticed in the right iliac fossa.

The contractions of the uterus I last observed on June 28th after the passage of the second piece of decidua.

The treatment adopted was of necessity entirely symptomatic: Opium, Carminative, Spiritus Ammoniaci Aromatizati, Peppier, Bangkok, Strophanthus Brandi, Chloro.

She was under the great disadvantage of not being able to be treated in hospital, as the place was then closed for
repairs.

The performance of immediate operation at her own home seemed fraught with so much danger that the idea was not later abandoned, and thus it was intended to extract the child after a short interval, when the placenta might have become bloodless.

Something critical occurred very early in the pregnancy, as the pain, constipation, and flatulence were observed as early as 10 weeks after the last normal period from which the commencement of pregnancy may be dated, as the time of false labour was 9 months after that. Probably therefore there was a rupture of a fibrinous septation into the broad ligament during the first month of pregnancy.

The physical signs noticed in this case are so similar to those of the one next to be related that I shall deal with the two cases together, merely saying here that this was probably a case of sub-peritoneo-abdominal gestation.

The success of the treatment followed in
the next case also encouraged me to pursue the same treatment in what appeared to be so similar a condition.

**Case XXXII.** The patient was aged 39 years and was admitted to hospital on 9 October 1874, complaining of an abdominal swelling with much pain, also pain in the rectum on defecation.

**History.** The patient's first pregnancy resulted in an abortion, the second child is living and was born in 1874. There have been abortions since then but none for 14 years. There seems to have been no suspicion of any gynaecological ailments, menstruation being normal except for occasional slight dysmenorrhoea; there was also apparent membranous dysmenorrhoea occasionally.

**Present Illness.** Her last period was in April and only lasted 2 days; it was accompanied by severe pain in the hypogastrum and rectum and the faeces. After this there was tenesmus often without the passing of anything at all, and the stools were frequent of very
small calibre.

In recovering from this she seems to have been pretty well for 4 months.

Then she noticed a swelling first in the middle line of the abdomen but twice then directed to the left side. This was accompanied by pain, flatulence after food, bloody diarrhoea (14 to 10 times a day), teneurism and dysuria.

**Examination.** The breasts were enlarged and markedly pigmented.

**Abdomen - Inspection.** The linea nigra was very dark; the lower part of the abdomen was largely distended.

**Palpation.** The swelling was found to extend on the right side to six inches above the umbilicus and on the left to a slightly lower level; it bulged into the flanks. On the right side the consistency was tense and uniform but on the left the swelling was very irregular and during palpation slight movements, as of a child were detected in it. There were also on the left side two rounded swellings separated by a narrow sulcus; one was near the umbilicus and the other nearer the pubis; these were harder than the rest of the swelling and
underwent marked contractions.

There was a sensation felt over the whole swelling on the left side like very slight contractions. Complaint was made of the pain during the movements of the child but they were not described as excessive.

Auscultation: The foetal heart was heard on the left side about the usual position and beating at 160.

Per vaginam. A hard rounded bony mass at once recognized as a foetal head was felt distending the posterior vaginal wall, barely an inch from the uterine cervix. It practically blocked both the vaginal and rectal cavities and only one finger was admitted.

The cervix uteri was very high up behind the pubes and the os was directed anteriorly.

The cervix seemed to lie in exact line with the lower of the two swellings referred to above the pubes, in which contractions were occurring. This seemed to be therefore a slight cephalo-pelvic disproportion of normal shape. On rectal examination the sutures of the foetal head were very clearly detected.

Progress: The pain was kept under some
control but still came on in severe paroxysms to the left of the umbilicus; there was sickness and retching sometimes.

The foetal head was heard on Oct. 15th beating at the rate of 134; it was not detected after that but the patient said she felt slight movements on the 24th.

On the 23rd, the patient was put under Chloroform so that a true diagnosis might be arrived at. Though there was some doubt as to it being a case of entopic pregnancy, the contractions which seemed to be felt over the whole sac made it appear to be just possible that we were dealing with a case of retroflexed gravid uterus.

If it were the latter, pushing the head up out of the pelvis should relieve the condition; if it were the former, interference of such a character was strongly contra-indicated, and any forcible pressure would injure the bones of the foetal skull.

It was thus decided to use gradually, gentle pressure, so that the results perceptible were very slight: the capacity of the rectum however seemed to have increased so
that the stools were larger. After this there was much tympanites with tenderness over the upper part of the swelling on the left. There was however no alteration in temperature or pulse rate which were slightly above normal. On the 24th the patient was seized with great pain accompanied by tympanites; she was not able to lie down and was in a condition of great distress. The cicatrix became more patent and a cast of the entire uterus was passed. Unbroken, the inner surface being smooth and the outer shaggy; it was thick and fleshly. There was pain over the sacrum and hypogastrium during its passage and also slight bloody discharge which lasted for some days. The os also remained patent and the uterine contractions persisted. From that time the tympanites disappeared, the pain decreased, the head receded somewhat, and the sac containing the child decreased in size; the child itself was more readily detected. The patient then went home for a time but returned on January 10th complaining of menorrhagia and very severe pain.
It was found on examination that the upper level of the tumour was about the same but the right side was tender and fuller than before, with more defined upper limits and very tender. On the left side, bones were felt and there was less tenderness. The head had been moulded by pressure and projected beds into the vagina and rectum and the tissues between these cavities were thickened. There was slight increase of temperature and pulse rate. The pain was chiefly at the upper limit of the swelling and there were bad appetite and occasional vomiting. The pain proved rather intractable, therefore it was decided, as 100 days had elapsed since the false labour, that operation might be performed with but little risk of haemorrhage from the placenta.

Operation. This was performed on February 5th, 1895. All precautions were taken to secure an aseptic condition.

The abdomen was incised for 6 inches in the middle line between umbilicus and pubes: the abdominal walls were very thin. On opening the peritoneal cavity the sac
was seen, bluish in colour, smooth, shiny and covered with peritoneum; it was very like an ovarian cystic tumour. It extended entirely across the abdomen; its upper edge was slightly adherent to omentum, but its anterior surface was free. The cyst was of normal size, between the sac and the lower part of the incision and directed slightly to the left side. The sac wall was found to be very thin, and after introducing a hypodermic needle in that result a long mesial incision was made in the sac wall and the sides were stitched to the sides of the abdominal incision, with a view of rendering the subsequent steps of the operation practically extraperitoneal. There was no fluid in the sac.

On opening the sac the placenta was found filling the entire right side and extending slightly to the left of the middle line; the child occupied the left side, the head being downwards and the feet turned towards the incision. It was readily removed: it was a female and its size seemed that of a full-term well-developed child but it was much shrivelled and the epidermis was scraped off in part.
The head was much compressed at the back and its long diameter elongated. The placenta was found to be bloodless and so was removed; it was very large being folded in itself from above downwards and the sac wall was moulded accurately on to it. It was too large to remove entire and so was broken up into 3 or 4 large pieces; it was unfortunately not weighed or measured but it appeared to be half as large again as a normal placenta: it was thick and of close texture.

On its removal it was found that the posterior wall of the sac was rent and that bowel and omentum protruded into the sac, there being an adhesion between the omentum and placenta.

There was also disclosed, after the removal of the placenta, another sac inside the original one but of quite a different character: it was thin-walled and situated at the lower and posterior part of the cavity and on the right side: it was found ruptured. An attempt was made to remove it but there was a good deal of gaping so that was relinquished. The original sac was left in situ.
The peritoneal toilette was then performed and the wound closed with silkworm gut sutures and a drainage tube was inserted at the lowest part. The abdomen was strapped. The patient comitted a good deal on the day of operation: as food was given but rectal injections of hot water and teats of chicken broth. On the 3rd day she took a little liquid by the mouth. The drainage tube was removed on the 3rd day and the stitches on the 7th. The wound being then healed except for the lower part where the tube had been. There was slight inflammatory reaction shown by a temperature of 101° to 102° F. from the 6th to the 10th day (but checked at once by the administration of Peruna) and also by hard swelling over the sac wall. This disappeared after 3 weeks. There was some pain in the left dia phragm but always relieved by Peruna.

An examination per vaginam 4 weeks after operation the cervix was found to be easily reached by the finger and was directed posteriorly: the uterus was antemic and hard and very slightly larger than...
normal: there was a little thickening felt in both lateral fornices.
The patient went home cured a month after operation.

Diagnosis. In discussing the particular class of ectopic pregnancies of which this case appears to be an example, the fact to be borne in mind are the conditions seen on operation and the history of the pregnancy.

There seems to have been symptoms of rupture early in the pregnancy but as the patient did not even consider herself pregnant when Dr. Spils saw her shortly before the false labour, it is impossible to say positively how far the pregnancy was advanced when rupture occurred.

The child appeared to be fully developed and, as it died at the end of October, impregnation could not have taken place before the middle of January. Menstruation seems to have occurred in January, February, March and April but as the symptoms of rupture occurred at the time of the scanty period in April, it gives a possible
limits of 14 weeks at the outside, which is the limit given by Webster (op. cit. p. 37) and allowed by Taft (op. cit. p. 448).

The presentation must have been on the right side because the placenta was found there. The symptoms following rupture would favor a left-sided hematoma rather than a right-sided one, as the rectum was evidently so much compressed and irritated thereby. This may be accounted for by supposing the effusion to have involved both broad ligaments. But at the operation the uterus appeared to be normal in shape and covered with peritoneum; and if there had been an effusion filling the left broad ligament it could scarcely have reached that part without some stripping of the peritoneum in the anterior or posterior to the uterus, of which however there were no traces whatever at the operation.

The course taken by the effusion must therefore have been along the connective tissue at the lower uterine segment and towards the rectum, where it would cause the signs mentioned by Taft (op. cit. p. 466), and thus the symptoms of compression.
Notwithstanding that the pregnancy probably originated on the right side, the child developed on the left, as it was there that the patient noticed the swelling and there also that the child was palpated during life and found on operation.

The course taken by the gestation sac in its growth was in a posterior direction from the fact noted during operation, the uterus was anterior to the sac in the middle line and the sac rose from the floor of Douglas up to above the level of the umbilicus; the peritoneum therefore was folded over it rising up behind the uterus, covering the sac and dropping to a low level in the pelvis again before being folded back on the posterior abdominal wall. (See printed diagram on p. 91.)

The Fallopian tubes and ovaries were not recognized on either side of the uterus but as before mentioned there was in the sac at its lower part on the right side what appeared to be another sac but ruptured — that is the upper part was irregularly torn but the rent did not appear to have been freshly made as it did not
bled until it was incised.
The most probable explanation of the rent
is that it was the original rupture of the
Fallopian Tube, through which the gestation
sac had protruded, to which the placenta
retained its attachment. The difficulty
is however to explain how the tube could
be thus inside the sac with no immediate
covering of peritoneum and the uterus a few
inches off and yet outside the sac and with
its normal peritoneal covering.
The protrusion and growth of the sac first
of all through the rupture, then turning
back on itself and adhering to the anterior
and posterior layers of the broad ligament,
as in the first diagram (page 93)
would be quite conceivable.
The condition posterior to the uterus is repre-
thended in the second diagram and it is
impossible to reconcile these two.
In the first the condition would be that
of subperitoneal gestation and not
Subperitoneal Abdominal, because a lateral
section of the part covered by the sac
would show a covering of fetal membranes.
above the peritoneum, as explained by the diagram and the rupture in the tube is an intraperitoneal one.

The actual condition on the contrary was a gestation in a sac covered by peritoneum with the fetal membranes inside it, as in:

Lateral Section (diagrammatic)

Subperi toneo-abdominal as in this case.
The only feasible explanation of this case is that the peritoneum was stripped off the right Fallopian tube somewhere between the uterus and the ruptured portion far out in the tube, and the finding of the rent within the gestation sac may be explained as follows:—say that the posterior layer of the broad ligament was more raised up by the developing sac than the anterior; the anterior would be more of a fixed point than the posterior, the peritoneum of the posterior layer would gradually rise higher and higher until it had placed the
Fallopian Tube in the anterior wall of the sac instead of the upper, as in 1, 3, and 4 of the annexed diagram. It may be believed that the tube having the anterior part more fixed than the posterior would be capable of being dragged round by the growth of the sac until the upper and anterior part (which is indicated by the short line perpendicular to the tube in the diagram) was below and the rent pointing upwards.

The rupture in the first instance was not intra but extraperitoneal and the
peritoneum being attached to the upper and unruptured part of the tube could be stripped off it somewhat, without interfering with the ruptured portion which could be drawn gradually round in the direction in which the gestation was developing. This would have to be obliquely in this case, so as to raise the peritoneum from the pouch of Douglas without involving the uterus at all. Webster says (op. cit. p. 43) "in 2 cases of about 4. to 4½ months duration, the uterus was still separated from the gestation sac by a small piece of broad ligament, though in the outer part of the ligament, the sac had reached the floor." This must have been the condition in this case also but persisting until the end of pregnancy, as the posterior peritoneal covering of the uterus was undisturbed.

The placenta had probably undergone increase in size as the right side, where it was situated, became harder, more tense and more painful after the death of the child; and at the operation it was found to be very large and of close texture than normal. This is

* It would agree with Webster’s statement from Worth (op. cit. p. 43) that "if Mead commonly spreads downwards in the outer part of the ligament gradually advancing towards the uterus both not with that in full (op. cit.) that in the middle of pregnancy it is usually part of the wall of the sac."
explainable by supposing that some haemorrhage had taken place into its substance which caused degeneration and also increased its bulk. (Webster op. cit. p. 102) Unfortunately the placenta was thrown away before it could be minutely examined.

The placenta was probably detached inside the ruptured part alluded to; it was more loosely adherent to the sides of the sac than it was to the lower part.

Island Sutton (op. cit. pp. 295 and 315) describes the children in ectopic pregnancies as showing a large percentage of malformations and being generally puny. In this and the other cases to be mentioned the children seemed, on the casual observation, accorded them, to be well developed. This case comes into the category of sub-peritoneal abdominal gestations (Sart and Carter, "Laboratory Reports," Royal College of Physicians, Edinburgh, Vol 2, p. 35) but differs from the particular case of which sections were made by Sart and Carter, in there being less stripping off of peritoneum and in being posterior to the uterus.
The peritoneum was not stripped off either anterior or posterior wall of the abdomen or the uterus, but off the pelvic floor.

The last case mentioned (Case XI) was very similar to this in so far as could be told without operation: the uterus was anterior to the sac, the position of the child and placenta were similar but in case XI the parts of the child were very clearly defined, whereas in this case they were not, and yet in this case the abdominal wall was found to be very thin and the sac also. Possibly a difference in the amount of liquor amnii was the cause of this.

Case XIII. This was in point of time the first case to come under observation: she was seen in August 1889 and operated on in January 1890. She was not under my care at the time of operation so that the record is not as full as in other cases would be.

History. The patient was a woman (about 30 years of age) and had had one child about 15 years before. Menstruation had since then been normal except for one attack of
When first seen in August 1887 she thought she was about to miscarry but there was no pain or discharge when she was examined. A little blood and a few thin pieces of debris like mucus were passed: the os was dilated to the size of half a crown, the cervix was hard and its canal roughened. This should have raised suspicion as to its character but it did not. The examination made was probably not very thorough and no suspicion of the true condition crossed our minds until we were called to see her in consultation shortly before the operation.

Present Illness. In December 1888 she says she had an attack of severe pain in the lower part of the abdomen, with rigors; after this the menses stopped, and there were one or two attacks of pain with slight discharge and constipation. She described one attack of sudden giddiness and faintness while at stool, after which there were dior discharge, constipation, flatulence and tenesmus of the abdomen.

She noticed the abdomen enlarging on the
right side: at 5 months she quickened. and the movements she thought excessive. She suffered from vomiting and pain in the epigastrium during her frequency. In September the movements ceased.
Examination: Per vaginam, the anterior, post-erior, and right lateral fornices were depressed by a rounded, doughy swelling: the vaginal cavity was thus contracted. The os uteri was fathomed.
Abdomen: Palpation detected a large swelling on the right side which was however slightly movable. In the right iliac fossa it was hard like bone and there was also a small bony mass like a knee or elbow felt in the right hypochondrium. The patient was thin, and worn and feverish.
Operation: The incision was medial and extended from umbilicus to pubis. In reaching the peritoneal cavity a sac was disclosed which was adherent to the abdominal wall on each side of the incision. On introducing a trocar and cannula, a quantity of dark olive-green fluid came
away. The skin incision was slightly
enlarged and the sac then opened; it was
thick-walled.

The child's head presented at the incision.
There were many adhesions between the
body of the child, which was well-developed,
and the sac, and fluids was oozing be-
tween them; these were readily broken down.
The placenta was adherent at the lower
part of the sac but there was no hemorrhage
on its removal. The uterus was not
seen but was felt through the anterior
wall of the sac and was slightly enlarged.
The sac was washed out, stitched up
and a drainage tube inserted and the
abdominal incision closed.

There was some febrile reaction for a few
days but by the 13th day the patient
was able to sit up. There was copious
purulent discharge and a fever was
left for some months.

Diagnosis. The patient gives a history
suggestive of rupture of an ectopic gestation
in the early months, and consequent falla-
tion. There were discharge, constipation,
and tinctures of the abdomen. The gestation was on the right side and seems to have been somewhat similar to the last case (Case XII) in that the posterior peritoneal layer of the peritoneum was raised off the broad ligament. The uterus was also adherent to the sac but it is not known whether it entered into the formation of the anterior wall of the sac, as described by Webster (op. cit. p. 447) or was free like Case XII.

The history of the passing of decidua is obscure though the debris passed when she was in hospital in August 1887 may have been part of the decidua. There is no history either of false labour.

Other points in which this case differed from Case XII are the adhesions formed between the body of the child and the interior of the sac, and also the non-absorption of the ligament annuli. Such adhesions are mentioned by Rand Sutton (op. cit. p. 282) as being found common where the foetus has undergone change into adipocere but it is not known whether that was the condition in this case.

The sac appeared to be adherent to the an-
Perin abdominal wall on either side of the middle line. The interval between the two adherent parts may have been the peritoneal tube referred to by Thel (op. cit. pp. 520 and 521) as being left attached to the fundus uteri in the cases where the layer of peritoneum is stripped off the anterior abdominal wall.

If the sac were like that in Case XII and the peritoneum were stripped off the floor rather than the walls of the pelvis, this interval must have been between true inflammatory adhesions uniting the sac to the abdominal wall on each side of the middle line but leaving the middle line free; which is rather a difficult condition to explain.

Case XIV. The patient was a primipara aged about 28 and was seen on June 9, 1870. She said that labour had come on 3 days before, with pain in the back and in the hypogastrum; that after 1 day the movements of the child ceased and came thing evidently of a membranous character had been passed; this was said to have been thin and foul and about the size of
the palm of the hand. The abdomen had
decreased in size somewhat since then.

Examination. Per vaginam. The parts were
felt to be exceedingly soft; the cervix uteri
did not project from the vaginal roof; the
exit was very slightly dilated and rough
outside. The examination of the fornices
revealed something of indefinite hardness
but nothing distinct; the smell was very
foul. There was no presenting part felt
in the os uteri.

Abdomen. The enlargement of the abdomen
was from side to side rather than in the
vertical axis: there was dullness on peri-

cussion up to the umbilicus; the parts of
the body were not distinctly palpated.
Inspection revealed nothing.
The sound entered the uterus more than
2 inches.

Progress. It was desired in the first place
to dilate the cervix in order to explore the
uterine cavity. Tents were tried and
failed and Barre's bags likewise.
There was some vomiting and pain
referred to the region of the umbilicus.
The patient passed some very foul membro-
nous shreds containing translucent bodies like
small white currants.
Taking into consideration the size and shape charac-
ter of the abdominal swelling, the small
size of the uterus, the passage of the foul
membrane and the unavailing symptoms
of labour, the diagnosis was made of
beteopathic pregnancy advanced to the stage
of false labour.
The temperature fluctuating between nor-
mal and 101.0° and the pain not abating,
it was decided to operate without further
delay.
Under Chloroform the patient was again
examined and there was found to be a hard,
rounded mass in the anterior fornix and
slightly movable; with the finger in the uterus
it was felt that the left side of the wall
was rough but the rest smooth, there
was also a large hard mass felt through the
uterine wall anteriorly and to the right.
Operation After the carrying out of strict
antiseptic precautions an exploratory
incision was made in the middle line
of the abdomen. On reaching the peritoneum, dark clots were seen and some dark fluid blood escaped. The incision was then enlarged from umbilicus to pubes.

The umbilical cord was seen at once lying among the clots slightly to the left of the incision. On following it up the body of the foetus was found, a well-developed female child with epidermis just beginning to peel off. Its head was to the right of the incision and at its upper limit; the body was directed anteriorly with the feet towards the left. It was covered by amnion in one spot but was easily removed on drawing this away. There was also a coil of large bowel running transversely about the level of the middle of the incision and below the body of the child; the umbilical cord ran between this coil and the anterior abdominal wall.

When the body of the child had been removed, the fingers were carried down the cord and found the placenta running from side to side anterior to the uterus and...
attached firmly at either side of the pelvis. At the lower margin of the placenta was found a thin membrane connecting it with the parts below it and preventing the fingers meeting round the placenta; the whole of the placenta was smooth. The upper limit was found about half way between umbilicus and pubes and the cord was attached to its anteriorly.

The uterine and broad ligaments were found posterior to the placenta and far out in the right broad ligament there were three cystic masses about the size of a mandarin orange which yielded a little blood on the introduction of a hypodermic needle.

The pelvis was cleared and the wound stitched up and two drainage tubes introduced.

The rest of the membrane was scraped away from the uterus next day and pure carbolic painted on.

The patient developed Septicaemia as we had feared owing to the nonremoval of the placenta. By the fifth day
after operation her condition was serious; the temperature only reached 99.4°F in the evening and the pulse 114 but she was unconscious and passed her motions and urine incontinently and there was diarrhoea.

On the sixth day therefore she was put under chloroform and the placenta removed by gentle traction. It was extremely foetid.

There was noticed a cavity apparently not in connection with the general peritoneal cavity but bounded above by the aforesaid transverse colon and anteriorly by the anterior abdominal wall.

The cavity was washed out and packed with toluoform gauze and the edges of the wound were refreshed and restitched. Symptoms seemed to improve but by the next day Pneumonia had developed and the patient died on the seventh day after operation.

It is easy to criticize the treatment of this case after the event. The fatal step was of course the omission to remove the placenta at the operation, as the fact of the placenta being
practically free for a considerable extent on its lower border and attacked only at the sides would probably have rendered its removal by lecithine or cautery an easy matter. We were alarmed by reading records of the fatal haemorrhage caused by rashly removing the placenta and this did not attempt it in what would probably have been an easy and successful case.

Another mistake was the waiting till the third day before removing the placenta, as even on the fourth there was evident depletion.

The very operation itself may have been unnecessary as probably the patient could have waited some time for it, like the normal membrane had been removed from the uterus.

Diagnosis. In determining the particular variety of ectopic gestation to which this case belonged, the crucial point seems to be the thin layer of membrane below the placenta, which prevented the fingers meeting around it. Without that the wi-
dence would point to the child with its pla-

centa being actually in the peritoneal cavity,
because it appeared to lie in the same cavity
as the transverse colon, omentum, uteros, and broad
ligaments. But that the membrane
raises the suspicion that it was really
the chorion and amnion, which was carried on
from the placenta both anteriorly and posteriorly
to cover all the pelvis organs, the anterior and
posterior abdominal walls and the lower part
of the omentum and transverse colon, thus
shutting off a cavity in which the gestation
developed.*

There is no history of any suspicion of a wet during
pregnancy to indicate a rupture of a Subal
gestation. Consequently it is possible to suppose
that the rupture occurred so gradually as not
to cause symptoms either of internal haemor-
rhage) or subsequent haematoma (or else
that no rupture occurred but spurted through
the thinned tube wall or even it another
abdominale. In either case it seems
evident that the embryo escaped, surrounded
by its membranes which adhered as a thin
layer to the above named organs; the

* vide diagram p. 93.
placenta retaining its adhesion to the point of rupture or erosion and then spreading over to be attached to the other side of the pelvis.

The rounded masses noticed in the outer end of the right broad ligament may give the clue to the side on which the gestation developed and to the position of the original rupture. These masses may have been caused by Haematozalpinus, the tube not being movable but fixed by peritoneal adhesions.

Webster (op. cit. p. 444) says "After the early months, the fertilized and can rarely be recognized; it gets flattened out and incorporated with the gestation sac, or hidden by inflammatory deposit."

But without the aid of carefully prepared frozen sections it would have been impossible to determine absolutely the nature of this case.

Its development was either Subo-peritoneal (which means that the placenta retained a connection with the tube and the gestation sac developed in the peritoneal cavity, the thin membranes alone intervening between the
abdominal viscéra and the child) or else intra-peritoneal, a class not only unproven but regarded with the greatest suspicion owing to the absorptive powers of the peritoneum. It was not an example of secondary rupture of a sub-peritoneal abdominal gestation, as no sac was determined and no rupture found, and yet the child was apparently in the cavity of the peritoneum, which it could not have reached without a rupture.

A comparison of this case with that described by Webster (op. cit. pp 53 to 58) shows certain differences. In Webster's case the placenta was still inside the tube in one sac and the foetus was in another, formed of its membranes adherent to the peritoneal lining of the viscéra.

In this case however it appeared as if the placenta as well as the child had left its original position: certainly the placenta was not in any sac formed by the tube but one end of the placenta may possibly have been in connection with the fimbriated extremity of the tube.
This is as far as conjecture can go: examination by frozen section alone could have determined the anatomical relationship. The case resembles more closely those of Jeesop and Bandl where the child was said to be free in the abdominal cavity without membranes. Jeesop's case is described by Tait (op. cit. p. 494 to 497) and explanations given; Webster also alludes to it (op. cit. p. 57). The condition found on operation as noted by Tait (p. 497) showed that in that case and this, the omentum came down over the body of the foetus; in this, the child presented to the incision by the head but in that, by the breech. The placenta was in both cases been covering the inlet of the pelvis but it was more set on its edge in this than in Jeesop's. It is permissible to believe that in Jeesop's case, as in this, the foetal membranes were so one with the peritoneal lining of the abdomen that the smooth membrane felt on opening the abdominal cavity was really amnion and not peritoneum. In Bandl's case (Tait, p. 497) there is
more resemblance to this one as it was seen on the reopening of the abdomen for the removal of the placenta, as by that time the membrane was thicker and more evident.

Case XV. The patient was aged about 28 and was seen in 1893 by a pupil who gave me notes of the case.

History. She had had 1 pregnancy 6 years previously, after which she had some pelvic trouble. She had now had 3 months amenorrhoea with nausea, especially in the mornings. She thought she was pregnant but there was more pain than in her previous pregnancy and the increase was entirely on the left side.

Examination. The cervix is soft and the uterus appears normal. There is a swelling in the left forearm as big as a fist and rather painful. The breasts were enlarged and the areola darkened.

The diagnosis made was uterine pregnancy and as the patient was in the country, she was advised to come to Antor.
anaemia for treatment. She went to a native midwife instead.

After a year the following history was given by the husband. The abdomen gradually enlarged as in pregnancy, but one day the patient fainted and weakness developed rapidly. An abscess appeared and burst in the left iliac region, from which there were discharged pus and bits of bone: the odor was extremely fetid. The abscess proved fatal.

Diagnosis. The gestation sac was in the cecum on the left side; there is no clear history of previous rupture, but as the development of the child was somewhat advanced it is probable that the rupture was extra-peritoneal and the development sub-peritoneo-pelvic.

The foetus died and was necessarily in close contact with the rectum.

It is with the sac in this situation that abscess is most prone to develop after the death of the foetus, as pointed out by Ward ("Selected Papers", p. 61 quoted by Webster, op. cit. p. 57). This is especially when there is much detachment of the placenta.
such as occurs most frequently when the placenta is situated above the child and is thus apt to be displaced by its development and movement.

Assess in this case ruptured into the left side region so that probably the perito-neal layer of the anterior abdominal wall and the anterior layer of the broad ligament were lifted up by the growing ovum so that the peritoneum sac and anterior abdominal wall were in immediate apposition.

The rupture of abscess by the anterior abdominal wall is not the most common variety as in the lists from D'Esse, Parry, Voukememerghe and Peck given by Webster (op. cit. pp. 48 and 149) it is second to rupture into the intestinal canal; and Fair (op. cit. p. 491) and Bland-Sutton (op. cit. p. 1244) also place rupture into the intestinal canal (rectum) first, but both place the rupture by the abdominal wall last in the matter of frequency.

It does not seem to be a very fatal form as Webster (op. cit. p. 50) gives a mortality of 8 out of 53 cases or 15 per cent. But
this case died, probably from prolonged discharge and want of proper attention.

Case XVI. This is another case of suppuration in the sac of an ectopic pregnancy and I had the opportunity of observing but not of treating her.

History. The patient was about 35 years of age and had had one child at term and one abortion, the latter during 1896. She suffered from pain in both ovarian regions before each period.

Present illness. The pregnancy at the close of which I saw her was her third and it was said to have advanced to 5 months. She suffered from extreme like pains in the right iliac region during the whole time and she says that the swelling was on the right side and extended up to the level of the umbilicus. Three weeks before the date at which I saw her, she says she was seized with sudden faintness and pain and appears to have actually fainted. She was very thirsty and drank much water.
she vomited a great deal also.
The movements of the child were no longer felt after that seizure. A week after
that she passed something about the size of a large egg, in consistency like
"brain" and without smell.
After that she entered a hospital, not
under our care, complaining of an extreme-
tly tender swelling in the lower part of
the abdomen. She stayed in for 16 days
and after reaching home again, on the
very day she left hospital, the swelling
bust at the umbilicus and much
blood and pus of an exceedingly putrid
character were passed. The discharge
of blood soon stopped but that of pus
continued.
After 6 days there was passed through the
stoma at the umbilicus a very flattened
foetus, complete.
She has a slight headache and feels
occasional chills, the bowels are natural
and the appetite fairly good.
Examination. The temperature was raised.
The pulse was 124 and fairly strong.
The lower part of the abdomen was visibly distended, especially on the right side. At the umbilicus there was a small sinus, apparently about one inch in length: the surface of the abdomen was encrusted with pus all round and the smell was exceedingly fetid. The upper limit of the swelling is felt to be at the umbilical level on the right and the swelling itself was homogeneous and tense.

There were no facilities for further examination and the patient was recommended to come immediately where she could be treated. Operation was considered necessary for drainage and for the removal of the placenta. The patient however never appeared again, but on inquiry I heard that she slowly recovered and about six weeks afterwards was reported well but the sinus still discharging.

**Diagnosis.** This case illustrates the tendency to abscess formation even though the sac is not broken: it was probably an extra-peritoneal develop...
ligament and raising up the fold of peritoneum between the anterior abdominal wall and the broad ligament, so that the sac and the abdominal wall would be in direct apposition and coming into contact with bowel on the posterior side, by means of which contamination arose and caused the suppuration of the sac contents.

The peritoneum was probably raised up to the level of the umbilicus, so that the abscess, keeping the usual law, pointed there where there was the least resistance.

The symptoms mentioned were those of rupture of an ectopic gestation but the duration of pregnancy at the time would, if the patient was 28 weeks, be believed, for a little over 4 months, which is exceedingly late for the rupture of a tubal pregnancy. It is the usual time for rupture of an interstitial pregnancy but as that accident is invariably fatal and this case survived, it cannot be placed in that category. It is possible that the woman's statement may be not quite correct. Otherwise the sac must have grown viscidiously.
into the broad ligament and rupture have been delayed.

The cramp-like pain in the right side region felt during the pregnancy is to be ascribed to peristaltic action going on in the tube (Webster, op. cit. p. 156).

The height attained by the tumour, viz., up to the umbilicus, does not correspond with the duration of pregnancy, if the word of the patient were correct that she was in her 5th month. But Webster says (op. cit. p. 160) that the level of an ectopic pregnancy tends to be higher than that of a normal pregnancy at the same period of duration and thus although the level of the umbilicus had been attained it is possible to believe that the pregnancy was not further advanced than 4 months. This corresponds exactly with the condition noticed in case IX, where the growth of the gestation was carefully followed until the death of the foetus, after which the hectic character of the temperature point to suppuration having taken place.
The patient, however, mentions her having felt movements in the sac until the onset of the severe symptoms complained of; this would place the duration of the pregnancy at more than 4½ months, unless the patient were also mistaken over that.

Symptoms, Signs and Differential Diagnosis.

This concludes the detailed examination of the individual cases of ectopic pregnancy and in the remainder of this paper the symptoms and physical signs will be dealt with collectively and the differential diagnosis of some other cases given. The symptoms and physical signs will be worked out from these cases alone, without reference to the statements of books on the subject.

**Symptoms.** The usual symptoms of pregnancy, e.g., nausea and morning sickness, appear as in Cases V, VI, IX and XV, but they are not found in every case, any more
than they are in every case of normal pregnancy. Amenorrhoea appears to be in no case absolute during the whole of pregnancy; there is a record of Amenorrhoea varying from 1 to 3 months in duration. In one case there was no Amenorrhoea; in 3 it lasted 1 month or over; in 2 for 2 months or over; in 4 for 3 months or over, and in one it was stated to be for 4 months and in one, five but the last two are open to doubt. In 4 it was not ascertained. Discharge invariably took place, sometimes at the monthly period but scantily, as in Case IX; sometimes as in cases V and IX a scanty discharge would recur frequently. Sometimes again a profuse discharge occurs with the crisis, as in cases V, X and XI, Amenorrhoea having been complete up to then. (The word "crisis" is used in preference to "rupture" so as to cover cases of tubal abortion as well as of actual rupture of the gestation sac, because the symptoms of both are alike but probably vary in degree.)
Sometimes as in case 1 the crisis may occur without a coincident discharge. The character of the discharge also varies as well as the quantity and time of appearance; it is sometimes merely stained with blood and sometimes very dark: it is probable that study of this point will reveal facts of diagnostic importance, just as the colour of the blood passed is so important in deciding the point of origin of haemorrhage from the urinary tract.

Pain is to be resolved into two classes, viz. that occurring before the crisis and that met with at the crisis. During the pregnancy as in cases I, VI and XVI there may be paroxysms like cramps. There may be no pain until the crisis is imminent as in V, X and XII.

At the crisis some cases do not seem to experience pain, as in VIII and possibly XIV. The majority of patients however complain of very severe pain of a violent and tearing description.

The symptoms at the time of crisis are of varying severity: they are those of loss of blood and shock. Faintness,
or
giddiness, actual syncope appear usually quite suddenly, accompanied by thirst and cold sweat, all due to the loss of blood. Collapse and vomiting are sometimes seen. In the fatal cases the collapse increases and nothing is sufficient to stimulate the patient. Following the critical symptoms there are those due to the presence of the effusion, which are usually simply those of pressure. In cases IV and V, e.g., there was tenesmus due to the enormous bulging of the effusion which nearly blocked the rectum. In case XII there appears to have been a similar condition, tenesmus and frequent bloody diarrhoea having been noted, but she was not under observation at the time, so the particular part occupied by the effusion can only be surmised, the symptoms pointing to an effusion constric-
ing the rectum.
The bladder may be pressed on by the effusion and thus dysuria be caused, as in Case I; or the effusion may press on the nerves of the sacral plexus and
cause pain in the legs, as in cases vii and ix.

If the patient survives this and the ovum continues to develop, it is noticed that interference with the functions of the intestinal tract occurs, e.g., nausea, flatulence, feeling of weight or tenderness in the epigastrium, indigestion and frequently constipation; these were marked in cases ix, xi and xiii. During the latter half of pregnancy there seems to have been amenorrhoea continuously in every case except no. xiii, where a slight discharge is recorded.

The movements of the child are stated to be confined to one side, and they are sometimes very excessive, as in cases xi and xiii. Pain is felt in the abdomen, probably in connection with the ovum pressed upon, as it is largely referred to the intestinal tract.

At the full term of pregnancy or sometimes earlier a false labour occurs, characterized by rhythmical pains in the back and the lower part of the abdomen, sometimes
Exceedingly severe, as in cases IX, XI, XII, and XIV.

This is followed sometimes by intestinal symptoms again e.g. tympanitic distension, diarrhoea, as in cases IX and XI, which may be due as in the first named to irritation from suppuration in the gestation sac.

**Physical Signs. The Breasts.** The breasts are usually somewhat enlarged and in the later months are found to be secreting. The areolae are often very much darkened and in almost every case some alteration was found in pigmentation. These changes were observed in cases I, V, IX, X, XII and probably occurred in other cases even though not recorded.

The shape of the Abdomen is different from the normal shape during the later months of pregnancy: the swelling is seen to be entirely on one side or else the Abdomen is more barrel-shaped or the Child occupies the lower part of it entirely even at full term.
The linea nigra was in several cases very well marked but in Case V it was not present.

Per vaginam. The examination reveals very varying conditions according to the development of the pregnancy at the time, e.g. the unruptured, the effusion intra- and extra-peritoneal, the ovum developing after rupture, the advanced pregnancy, subperi-tones-abdominal or tubo-peritoneal and the condition after false labour.

The cervix was softened in all cases being usually no different from its normal condition in pregnancy. The os uteri was sometimes fractious, especially during the progress of the passage of decidua and immediately after.

The uterus was found of normal size or slightly enlarged, not circular but pear-shaped as in the unimpregnated condition and the greatest length found by this sound was 3 inches; the sound however was not frequently used. It was found displaced usually, i.e. the early cases to the side opposite the gestation sac, i.e. it is
pushed over by the sac, as in Case I or
by the effusion. In later cases, as is XI
and XII it was directed towards the sac
but in these cases probably the placenta
pushed it over, being a tense, solid mass
exerting constant pressure.

Gestation sac. In one case there was the
opportunity of examining before the
rupture occurred. A soft rounded swelling
but irregular in outline was felt on the
left side of the uterus, pushing that organ
over to the right side. Later on, this was
replaced by a large effusion extending
up to the umbilicus. Nothing like that
was felt in any other case.

In cases seen after rupture, in which development continued, the sac was quite on one
side of the abdomen until the 6th month,
and as in Cases IX and XVI it had a
rounded outline and was hard and tense:
in Case IX the shape of the swelling was
seen to undergo marked changes, now growing
more in one direction and now in another,
but seldom showing any diminution in size
at any given spot.
In the cases seen soon after the effusion was formed there was much variety in the position and extent of the effused blood. Most frequently it was lateral. Being sometimes intraperitoneal as in Cases I, and sometimes extraperitoneal as in Case IX, less frequently it was posterior as in Cases V, IV and III, being then intraperitoneal in a haematocele. In one case viz. Case I, it was also anterior as well as lateral.

The cases seen near or at full term exhibited various peculiarities; the sac in some was low in the abdomen and the development seemed to be marked by from side to side rather than in the upward direction this was seen in X and XIV. The sac in other cases is distinctly on one side, as in Cases XI, XII and XIII, but it is not always confined to the one side, for in both XI and XII there was a tense swelling occupying a smaller area on the other side, this second swelling being formed probably by placenta.

The sac is felt distinctly to contain a child and in some instances, depending
on the thickness of the sacral wall and that of the abdominal parietes, the parts of the child are to be felt with unusual distinctness.

The position of the child naturally varies. In two cases XI and XII seen at the time of false labour, the child seemed to be in the normal position and to present with head downwards, the head being directed towards the brunch of Douglas and distending the posterior vaginal and anterior rectal walls, moving with each pain and occupying nearly the same position as in the second stage of normal labour. The fetal heart was also heard in the normal position in these two cases and beating at the rate of in one, 140 and in the other 160 per minute.

In other cases the body of the child occupied an abnormal position, the head being near the umbilicus and the body directed across the abdomen. The position occupied by the one naturally determines the position of the uterus and cervix. In two cases XI and XII the
Cervix was high up, just behind the pubes and could only just be reached by the finger, the whole uterus being pushed forwards by the development of the sac-posterior to it. In four out of the five cases seen at advanced cæloïc pregnancy the uterus was anterior and in the fifth it was not stated.

The decidua was seen in many cases and it was recorded in all but four, viz. and XIV in which abscess formed and and XIII. In these it was not remembered but it may not have been recognized or it may have been so mixed with clot as not to be easy to notice. It was passed sometimes in shreds, sometimes in 2 or 3 pieces and sometimes as a complete cast of the uterus. The size and thickness were variable, the largest being in Case XII which was full-time and in which the membrane was complete and at least the size of a 3-months abortion.

The passage of decidua may be delayed or it may be passed bit by bit as in an incomplete abortion; in these cases it
may decompose inside the uterus as in Case XIV and be foul-smelling and give rise likewise to a foul discharge.

**Differential Diagnosis.**

Ectopic Pregnancy has to be differentiated from certain other conditions depending on the period to which the pregnancy has advanced. This will be illustrated by records of cases and it will be convenient to consider them under the following headings:—

1. the period before rupture,
2. the period following rupture,
3. the later months of pregnancy,
4. after the false labour.

1. The period before rupture.

At this time Ectopic pregnancy has to be differentiated from other small tumours of the Fallopian tube, ovary, broad ligament and parovarium and from small unabsorbed effusions.

There are two cases to illustrate the difficulties of such diagnoses: they both show features common to ectopic pregnancy and
Ovaritis.

Case I. The patient who was seen in December 1894 was a 7-prima of 24 years of age, who complained of pain in the left side and a constant discharge. Her last confinement was 2½ years before and there were 2 years between that and her first.

Present Illness. Her menstruation was regular until lately when she missed one period. After a fortnight however it came on but was irregular in character, appearing for a day and stopping the next and so on for a week. Then it became darker in character, was more profuse and it was said to be foetid.

There was also pain in the left iliac region but over a very small area on which one could put the finger; it was darting in character and spread from that area. There was no fever. Micturition was rather frequent and painful and there was pain also on defecation. She had not felt any sickness but in one of her pregnancies she was not sick.

Examination. Per vaginam. The cervix was directed downwards and was soft, the os uteri harder and its margins rather
irregular. The uterus was more upright than normal; it was felt in the anterior for-
men but was difficult to define on account of its softness and the pain caused by any
pressure. In the right lateral fornix is a
small hard band; in the posterior is a small
and elongated thickening continuous with a
swelling found in the left lateral fornix.
This is the size of a tangerine orange,
rounded and well-defined on its lower surface
but not well felt on the upper surface, as it
was not considered right to employ any hard
pressure. It seems to touch the uterus at
the side but not to be one with it. It is
firm in consistence but has not the tense-
ness of a cork nor the hardness of a fibroid;
it is tender but not exceedingly so. It is
slightly irregular, having a small sulcus
on the under surface and there is an
indefinite feeling of pulsation in it.
There was no pain or pressure in the posterior
fornix.
The fingers were blood stained and the odor
from them testified.
The character of the swelling combined with
the amenorrhoea and discharge pointed to- 
wards ectopic pregnancy as a possible or 
even probable diagnosis, so that it was neces-
-sary to take all precautions against a sudden 
rupture occurring. The patient therefore 
was kept in bed and not allowed to sit up 
at all and the friends were warned of the 
possibility of such a crisis. Fortunately this 
did not take place.

Progress. On examination after a few days 
there was no change, the discharge was less 
and no longer foetid, antiseptic injections 
having been used.
After a fortnight the discharge had nearly 
stopped and the swelling had fallen into 
the pouch of Douglas where it was much 
like a retroflexed fundus uteri.
In another fortnight it was found to have 
increased in size; it was very easily felt 
per rectum and extended more to the left 
side than the right. In the posterior fornix 
the right side was a small hard nodule 
grateful to touch.
In another 10 days the cervix was found 
still soft but less so than in pregnancy.
The uterus was anteroin and not enlarged. The swelling was noted as being regular in outline and more like a cyst, rounded, soft, non-tender, non-movable, and painful on pressure.

After another week it was somewhat higher up and smaller; there had been menstruation lasting two days with a little pain. From that time the swelling decreased in size until on examination 5 months afterwards (i.e. 7 months after the first examination) it was no longer felt at all. By that time however pregnancy had intervened and had advanced to 17 months.

Diagnosis. The diagnosis appeared to lie between an early abortion complicated with ovaritis, or small ovarian tumour, a simple ovaritis, and an unruptured ectopic pregnancy. It will be necessary to add to these a tubal abortion which did not then enter into our thought.

The softness of the cervix taken together with the amenorrhea pointed to a pregnancy, however there was no lecithin. The uterus was not enlarged, although it was soft.
Seemed possible to exclude abortion as she had been attended by a qualified midwife and nothing had been passed: it was not an incomplete abortion. The swelling in the left side of the pelvis was very similar to that described as to be felt in unruptured ectopic pregnancy, as it was soft and pulsating somewhat and its size corresponded with the duration of amenorrhoea. It seemed how-ever regular in outline and no evidence of connection with a Fallopian tube was obtained.

It might have been diagnosed as a tubal abortion but that there was no haemorrhage at all into the peritoneal cavity and the rounded swelling if a tubal abortion should have been absorbed very quickly by the peritoneum, instead of which it was seen a triple larger at the end of the month after treatment commenced.

It was not a neoplasm as that would not undergo gradual diminution as this case did.

It sometimes happens that a tubal mole occurs which does not cause haemorrhage on rupture, as described by Cullingworth.
(Tubal qestation p. 20). This case might be one of that kind, the slight enlargement being accounted for by a small hemorrhage into the gestation.

Failing that it must be diagnosed as an Ovaritis of an exceedingly chronic character as that alone would account for the diminution in size. It did not correspond in shape to the ordinary distentions of the Fallopian Tube.

My feeling in regard to the diagnosis is that it was probably a case of Retropregancy ending in mole.

Case 2. The patient was about 35 years of age; she was a 5-para, having had 2 children and then 3 early abortions. She came complaining of pain in the right thigh, repain, and discharge which lasted for a week before admission. She was admitted to Hospital in September 1896.

Present Illness. She had felt some weight and heaviness in the pelvis and had gone the things, a little beyond her menstrual period. She took a walk of about 10 miles and on
her return, the period came on with pain specially in the right iliac region and she passed something like a membrane. She did not think herself pregnant.

Menstruation. Since these abortions mentioned she has suffered from pain in the right iliac region at the period and from a feeling of weakness in the right leg.

Examination. Per vaginam. The cervix was directed posteriorly and rather left and the os was not patent. The uterus was small and anterior and depressed the anterior fornix greatly. To the right of it is a small irregular swelling, firm in consistence and with a large vessel passing over it, which produces the uterus off to the left somewhat and is felt to be felt above the pubis. It is about the size of a hen's egg. The patient says she has felt the small swelling off during the week of her illness, that there is pain in it and pain felt on pressure. On menstruation and defecation. The catheter was required on the day of admission.

Progress. Her temperature that day (Sept. 20th) rose to 101° F, but sank again to normal.
The pulse was 88.
On the next day the temperature rose to 99.6°F, and on the day following to 99.2°F, after which it remained normal.
The menstruation stopped when she entered hospital but came on again in ten days and lasted for 3 days being followed by a coloured discharge.

After that she was examined again (on the 19th) and there was noted in addition a large irregular hardness extending from the side of the uterus to the level of the right anterior superior spine of the ilium and following the line of the broad ligament. The swelling alluded to is at the outer side of this and is rounded; but the posterior part of it seems to come higher up than the anterior. The pain on pressure is now very slight.
After a week (27th) the swelling was enlarged to about the size of a turtle's egg and well defined: behind it was felt a hard rounded swelling smaller and higher up and more fixed.
She was treated as an Outpatient after that and the progress noted was that
had
swelling, except on examination, the
swelling decreased slightly and was not
moveable.

Three months after her admission, palpation
it was felt as a bulging at the outer end
of the Fallopian tube and there was a
hard patch in the tube near the ovaries.
After another two months it was again
about the size of a hen's egg.

Diagnosis. The supposed amenorrhoea
and the passage of something like a men-
brane as well as the subsequent Metrorrhagia
are suggestive of tubal pregnancy and the
physical signs were in favour of it being
that condition, terminating as suggested
in the last case, in a mole and haematoma
Fallopia.

It was thought to be a pyosalpinx with some
inflammatory exudation about it causing
alteration in size and hardness, and the
temperature on admission was in favour of
that. But it was not as tender to the
touch as would have been expected in a
pyosalpinx and its decrease in size was
more than would have been expected in that.
The symptoms abated and so no operative interference was undertaken, failing which a true diagnosis can scarcely be come to in this case.

(2) The period following rupture.
I have no case to offer in illustration of this.

(3) The later months of pregnancy.
When the pregnancy is evident, it has to be determined whether it is intra-uterine or ectopic.
A condition needing careful diagnosis is this connection of thinness of the abdominal walls, of which a case is submitted.
A woman came in January 1896 to the Out-patient Clinique, saying she was a multipara and 7 months pregnant and that she had constant pain in the lower part of the abdomen but not severe. There was an apparent decrease in the size of the abdomen during one week in the fifth month, since which it had increased naturally.
Examination, inspection, the utricle gravidæ
There are well-marked but there is no appearance of linea nigra: the woman has a very light skin.

The abdomen is much enlarged below the umbilicus but is not at all distended above.

Palpation. The enlargement is felt to be much more on the right side and to extend there to quite close to the ilium. The foetal parts and movements are felt with great distinctness.

Auscultation. The foetal heart was heard on the right side, close to the umbilicus; it was beating at the rate of 136 per minute and the 2 sounds were heard with great distinctness.

Per vaginam. The cervix was softened, dilated posteriorly and the os was patent.

The uterus was not felt but the child's head was felt very close to the examining finger, especially in the right lateral joint. It attained there a lower level than that felt through the os. After performing these seemed however occasional thickening occurring between the examining finger and the head.

The physical signs of this case pointed this to eclampsia pregnancy but the symptoms
failed to support that view. The distinctness of the movements, parts, and heartbeat of the foetus, the low position of the head, the want of limit like a uterine wall, and the lateral position of the child, as well as its failure to rise above the umbilicus, all indicated ectopic pregnancy.

On the return of the patient these points were found to be unaltered. While examining for openskin however the finger was kept pressing again to the os internum until it relaxed and the child's head was at once felt within it. On bimanual exami-
nation also, the uterus was felt distinctly to contract.

It was therefore concluded that the pa-
lient had very lax uterine walls which permitted the child to sink very low in the pelvis and to deviate largely to one side of the abdomen.

The woman did not return but she was

confined in March and the delivery was

said to be perfectly natural.

The diagnosis of this case was absolutely cleared up by the introduction of the finger.
at the 8th interview. If this had been im-
possible, the want of any symptoms indi-
cating rupture or of any abnormality in the
pregnancy was almost sufficient for the
exclusion of ectopic pregnancy as a diagnosis.

(4) After the false labour.
After the death of the child, it is often
very difficult to make a diagnosis, as one
is so very largely dependent on the history
given by the patient or her friends, and
as that again depends on such extremely
variable quantities as memory and intelligence,
it is possible to be greatly misled.
A case of Constipation near the Menopause
illustrates this well.
The patient, who was aged about 35, entered
Hospital in 1891, complaining of Abdominal
Tumour and Amenorrhoea.
History. She had had 7 children and 5 abor tors.
The last pregnancy was 2 years before.
She had had Syphilis and Smallpox but there
has been no history of illness after her Con-
fine ment.
Present Illness. She says she became preg-
11 months ago, she had amenorrhoea and morning sickness. At 5 months she quickened, but the child ceased to move at the 7th month. At 8 months there was a slight discharge for 3 days, which stopped until the time of admission: there was no pain felt with it. The abdomen decreased in size after that, but the tumour in it was moveable; sometimes it increased a little, and sometimes it decreased. She said the breast were large during the pregnancy but after the death of the child they became engorged and then got small again.

She sometimes feels severe pain in the left iliac fossa.

There was no history of any discharge during the pregnancy, nor of faintness or dizziness, nor any nausea or vomiting. The abdomen was suspicious. The upper part of the abdomen shows some fullness, and also the umbilical region.

Bipartation. There is a solid body felt in the left lumbar region, with many hard nodules over it, suggestive in the light of the history, of bones.

Percoceca. The left side is tympanitic.
the right dull.

Auscultation reveals nothing.

Pertussion. The cervix is soft and the os palpable. In the right lateral form is a rather hard body, the size of a large orange, which is painful on pressure.

Progress. On examination later, the percutaneous sound was dull over the swelling in the left lumbar region and over the umbilical region.

The swelling felt per vaginam is softer and extends more into the posterior fornix.

The rectum was full of gas.

Obstipation was present. The temperature was subnormal. In a few days the right breast became engorged, painful and hard. After being in Hospital rather more than a fortnight, the action of the bowels having been regulated, she menstruated. The state of the abdomen altered completely on the appearance of the discharge: it was still distended but was left all over, contained no hard masses and was resonant on percussion. The tumours disappeared and she left the Hospital after another week.
Diagnosis. The chief point in this case is the history; the patient said she had been pregnant 15 months, therefore the presumption was that the pregnancy was ectopic. The symptoms related were not those of ectopic but of normal pregnancy, there being no history pointing to rupture (which are not constant) nor to false labour (which is constant). The physical signs also did not point to the presence of a fetus; they proved that there were tumours both in the left lumbar region and right lateral fornix but with the exception of the hard nodules which, if the patient's statement were true, were probable bones, there was very little to indicate such a condition.

The patient's statement was believed by us because it was so categorical and after 12 pregnancies she was given credit for not being mistaken as to the 13th. That she was so, the physical signs fell after the menstruation and after the improvement in the distipation showed.
A large ovarian tumour, specially if a
Dermoid, may make diagnosis very difficult.
Two cases will be quoted of this.

Case 1. The patient, who was about 40 years
of age, entered Hospital in 1891, complaining
of an abdominal tumour, causing pain and
inconvenience.

History. She was a 4-para, her 3rd pregnancy,
terminating in abortion. 4 years ago she says
she became pregnant again and for 5 month,
everything was normal and she felt
fetal movement. Then menstruation
suddenly came on and the swelling dis-
appeared but after a month it was seen
again and it grew up, so that a year after
the first onset of her symptoms, it had
mounted up to near the xiphisternum.
She has noticed no change in its since then
and there was no false labour and no
decrease in size.

Menstruation has been scanty and rather
painful since then.

Examination. Inspection. The abdomen
was filled with a tumour extending up
nearly to the level of the xiphisternum.
but did not protrude like an ordinary pregnancy. The umbilicus was slightly protruberant.

**Palpation.** The right side of the tumour was firm on pressure, like a tight bag. A little to the right of the middle line, is hard bone like a flexed joint and pain on the upper part on the left. Down the left side many irregular particles like bone are felt and at the lower part is a more extended plate like bone. The tumour was freely movable in all directions.

**Measurement.** The circumference was 34 inches at the umbilicus.

**Perception.** The plautus are resonant but the anterior portion of the abdomen is dull on perception.

**Auclulation.** A vesicular sound is heard all over the tumour.

**Per Vagium.** The cervix was normal but the os uteri was slit. Palpationally the uterus was not felt distinctly but the tumour was found connected with the left broad ligament by a hard fibrous
band, which seemed to contain some-
thing harder and bone-like.
The patient was anaemic and spare
but not emaciated.
The circulatory, respiratory and abdom-
inal systems were normal.

Progress. A soft cyst-like swelling, the
size of a small orange, appeared in the
epigastrium; otherwise the condition
remained unchanged.
The diagnosis made was probably
ectopic pregnancy but possibly ovarian
cyst.

Laparotomy was performed and on
opening the peritoneal cavity the tumour
was seen as a tight white cyst, the
walls of which appeared to vary much in
thickness. In part, there was a hard
white, waxy substance which seemed to
occur in irregular and anastomosing
bands. On tapping, there escaped
many kinds of fluid from various daughter
cysts: a thick pale-yellow fluid which
plugged the trocar, a clear watery fluid,
a colostrum-thick fluid myometrium in
character, a yellow homogeneous fluid like pus, and a whitish thick fluid. There were also found various solid substances composing the tumour; the bone-hardness felt in parts was caused by bone, of which a considerable quantity was scattered quite irregularly throughout; there were also cartilage, a considerable quantity of hair, cheesy-looking matter like vernix caseosa, fat and connective tissue. The weight of the tumour, after most of the fluid content had drained away, was 5 lbs. 13 oz.

Progress. The patient made an uninterrupted recovery and was kept under observation for a full month, in order that the effect on menstruation of the operation performed might be watched. Menstruation however did not appear and this was explained afterward by the discovery that the patient must have been pregnant for a month at the time of operation. She was delivered naturally at term.

Diagnosis. The only way to rightly estimate a case like this is by careful
Consideration of the history. The patient gave an extraordinary history, which was only partially believed as it was thought probably she had not given the facts correctly. There was something like rupture but it was at five months, and it was unaccompanied by pain.

There was subsequent growth, such as might have occurred in a subperitoneal—abdominal gestation but there was no history of false labour or of a subsequent decrease in size. These two symptoms are insisted on by Taft (op. cit. p. 500) as being absolutely necessary and the experience of this as well as the previous and succeeding cases warrants their insistence. The physical signs in this case were quite compatible with those found in an ectopic pregnancy after death of the fetus at full term, just as in Case XII of their series described, but the symptoms were misleading.

Case II. Another case somewhat similar, was seen in the practice of another prac-
tension in 1871, in a multiparous patient aged 20.

History. There had been 6 months amenorrhea, with foetal movements and presence of milk in the breast. Since then menstruation has occurred for 4 months and been very painful. That is all the history obtainable.

Examination. Inspection. The abdomen is flattened down the middle line and contains a large swelling extending nearly up to the xiphisternum but not projecting much. There is fullness in both flanks. The linea nigra is very slightly marked. There are no striae gravidarum and no striae on the breast, which are small and not pendulous.

Palpation. The tumour is everywhere hard but in the left lumbar region the hardness is very slight. Some parts are like a tense cyst. Percussion. The note is clear in the flanks but dull over the tumour.

Per vaginam. The cervix was directed downwards and forwards. The uterus was felt antero-posteriorly, and much to the right and the
sound entered it for 2½ inches.
The tumour was felt on the right side freely movable and pressing downwards slightly.
Laparotomy was performed and a cystic tumour found which gave on tapping a clear, yellowish-brown fluid of a slightly viscous character. It was multilocular and contained a good deal of hair and some bone as well as sebaceous matter like vernix caseosa.
Progress was very good and resulted in recovery.
Diagnosis. If it be said that the extraordinary history is wanting in any symptoms like rupture or false labour, there is nothing left to indicate an ectopic pregnancy. The irregularity of menstruation and even the presence of milk in the breasts are recognized as symptoms found in ovarian Cystic Tumour, which was the diagnosis made, and verified by operation.

Many other conditions require to be differentiated from Ectopic Pregnancy but only those
are mentioned, which can be illustrated by cases.

In summing up the present paper, one or two points remain to be alluded to. The one is the great importance of Ectopic Pregnancy as a cause of Haematoma and Haematocèle: it appears to be a safe rule to always suspect it in those conditions unless there is evidence to the contrary.

Another is that many such cases recover without any operative treatment; rest alone, in order to allow of absorption proceeding naturally, seems often to be perfectly sufficient but it involves often a long period of confinement, as well as a certain amount of risk of suppuration occurring in the effusion.

Another point to mention is the frequent occurrence of Ectopic Pregnancy in patients previously sterile for a long term of years or else absolutely; 4 of the 16 cases had been absolutely sterile and 5 had been so for from 14 to 15 years.