INTRA-UTERINE ASCITES
-its-
OBSTETRICAL SIGNIFICANCE
-AND-
PATHOLOGY

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Photograph of my case of Intra-Uterine Ascites (½ Nat. Size)

The photograph was taken from a water-colour sketch made shortly after delivery. This plate shows very well the abnormal size of the abdomen, which is out of all proportion to the rest of the body.
Intra-Uterine Ascites
its
Obstetrical Significance
and
Pathology

with
An Account of a Case of Ascites
associated with a rare Malformation
of the Genital Organs

being
A Thesis for the Degree of M.D.
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Preface.

I have to thank the President and Fellows of the Royal College of Physicians for permission to pursue in their laboratory my work in connection with this Thesis, and especially the Superintendent of the Laboratory, Dr. Noel Paton, for his uniform courtesy and helpful advice. I have also to express my obligation to Dr. AHIB Balfour to whom I am indebted for the specimen of Intra-Uterine Aciotes which formed the basis of this enquiry; to Dr. Ballantine for having placed at my disposal the proof-sheets of his Case of Aciotes (which is shortly to appear in the Edinburgh Hospital Report) and some of the literature which I could not otherwise have seen; and to Dr. Webster for kindly sketching for me Plates VII-VIII.
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Part I.
I.

Introduction.

Obstetricians have long recognized that among the various pathological conditions of the foetus which may constitute a serious impediment to labour Ascites is one of considerable importance. Ascites from this cause is of such rare occurrence that when it does occur the true nature of the obstacle is apt to be overlooked. Prolonged and of course ineffectual attempts at delivery by traction are accordingly made, often with the most serious results to the patient. This is all the more deplorable because if the condition is recognized the proper treatment is easy and eminently satisfactory.

As giving a fairly typical picture of the Dystoeia which may be caused by a fluid accumulation in the peritoneal cavity of the foetus and as illustrating the ease with which it may be overcome when
appropriate treatment has been adopted, I quote in full one of the earliest recorded cases.

"In the year 1660 when I was engaged practicing midwifery in this place it happened one day that a nurse who was in attendance on a woman in her confinement was unable to deliver more than the head of the child. Finding that it was impossible for her to extract the rest of the body although she had exhausted herself in making strong traction on the head, she called in to her assistance an experienced midwife who in turn did not in her power to extract the child by pulling on its head but with no result beyond dislocating the cervical vertebrae. I was then summoned to their assistance. On my arrival they at once requested me to examine the patient in order to discover the cause which has prevented them delivering the child although they had pulled so strongly on its head and had made efforts which were more than sufficient to have delivered the shoulders though these had been very large. I very soon concluded that the difficulty proceeded from some other cause than the shoulders of the
child, for whom I had passed my flattened hand up to the entrance to the womb as far as the shoulders of the child I found they did not appear to be so large but what they could have been easily delivered. I introduced my hand further carrying it in front of the chest of the child as far as the hyphoid cartilage, where I recognised that the abdomen was dropsical and full of fluid so that it was impossible to extract it without having first punctured it in order to give a means of escape to the fluid which it contained. I had not however with me at the time a suitable instrument with which to do this and was therefore obliged to send for a doctor from the Hôtel Dieu. When this doctor arrived I stated the case to him and declared that in order to deliver the child it was necessary to puncture its abdomen which was distended by fluid. He was however unwilling to agree with me, either because he thought perhaps he knew his work without my advice or because he did not wish to, or could not, believe that the child was hydrocele as I had told him. Whatever was the cause he contented himself — without putting himself to the trouble of
examining the case—wish attempting delivery in his own way. He made traction once more on the head of the child and separated it entirely from the rest of the body; for it was but slightly attached, owing to the excessive violence of the efforts of the midwives who had been first in attendance on the case. After that, he introduced a blunt hook into the uterus and dragged away both the arms of the foetus, one after the other, and then some ribs, and then parts of the lungs and the heart. For three quarters of an hour he employed himself in thus dragging away fragments of the foetus (during which time he perspired freely although the weather at the time was very cold), until at last, disheartened and exhausted, he was compelled to abandon the task and take a rest. The midwife meanwhile succeeded in tearing away some pieces of ribs, using her hands only, for of course she could not have been allowed to use the blunt hook. A second time the doctor tried to extract the foetus, pulling on the hook with all his strength, but without any success because up to this time he had not punctured the abdominal wall or the diaphragm.
not wishing to do it, as I kept telling him each moment that without this it was impossible to deliver the rest of the body.

On seeing that all his efforts were for a second time useless, he at last gave me the blunt hook saying that I might have an opportunity of trying myself out as well as the others. I accepted it willingly and with pleasure, for I was very certain I could soon complete the operation, knowing well that instead of amusing myself as he had done it was only necessary to puncture the abdomen of the child in order to let the contained fluid escape, after which delivery of the child would be easy. For this object I introduced my left hand right up to the distended abdomen and passing the blunt hook along it I turned the point of the instrument towards the abdominal wall and forced the point into the abdominal cavity of the foetus. Then I withdrew my hand and at once all the fluid rushed out in a torrent. After this I drew out the rest of the body, with one hand without any difficulty, to the great astonishment of
the doctor who had never been able to persuade himself that the child was dropical.

After delivery I had the curiosity to fill the abdomen of the foetus with water in order to see what quantity it had contained and what its size was when quite full. I was able to introduce without exaggeration more than five pints of our Paris measure. This I would have had difficulty in believing had I not seen it. I record here the full history of the case in order that the accoucheur may know how to act on a similar occasion.


This somewhat amusing account illustrates very well how labour may be complicated by Ascites of the Foetus, and the treatment which is necessary to effect delivery. The recorded cases show that too often however the diagnosis of the complication has been made too late and that the patient in consequence of the protracted and misdirected efforts of her unskilful attendants has died of exhaustion or Septicaemia soon after delivery has
has been accomplished. In one case, at least, it is noted that rupture of the uterus occurred as a result of the neglect of appropriate treatment.

Apart however from its importance from an obstetrical point of view, the subject of Congenital Ascites is of interest considered as a pathological condition of the Fetus per se. Unfortunately the pathology has received little attention from the observers of many of the recorded cases, who were generally obstetricians and therefore more interested in the subject as a cause of Dystokia than in the morbid conditions accompanying or giving rise to it. In other cases a more or less complete post-mortem examination has been made and the results recorded; and from these data and those furnished by a case examined by myself, an attempt will be made in the following pages to consider Congenital Ascites in its pathological as well as its obstetrical bearings.
My own case occurred in the Maternity Hospital, Edinburgh, under the care of Dr. Freeland Barbour who kindly gave me the specimen for examination and description.

The foetus presented in addition to a well-marked ascites, evidently the result of Peritonitis, a strange malformation of the external and a rudimentary condition of the internal genital organs.

In addition to my own case I have been able to collect the records of 62 others. In this list I have not included any where the child was born dead unless it is stated that it was alive very shortly before labour or unless the accumulation of fluid was so great as to present an actual impediment to the delivery of the child.

In this way I have eliminated those in which, although described as cases of Congenital ascites, there is always the possibility that the effusion was due to post-mortem changes.

For the purpose of reference
1. Fau Gelder, De l'Arcite congénitale 1879
2. Her Hunt, Maladies Foetales 1876
3. Kohn, Die Geburten mangelalster Kinder 1863
4. Angleby, L'Arcite chez le Foetus 1884
I append a short but careful abstract of these 62 cases of which use will be made in the following pages. I have where possible consulted the original papers. This has been done in the majority of the cases. In a second group, I have not been able to get the original articles but have found them transcribed in the works of other investigators on this subject—Van Gelder, Hertot, Mohl, Angleby.

A third but small group consists of cases where I have been forced to content myself with the reports as abstracted in such medical journals as the Centralblatt für Gynäkologie, the publications in which the original articles appeared not being contained in our Edinburgh Libraries nor otherwise accessible to me.

In addition to these 62 cases, I give references to others which I have been unable to consult, and to one or two others where the specimen was simply exhibited without any reported description. While this list does not exhaust the literature of the
subject, yet it embraces I think all the important recorded cases.

II

Detailed description of my own Case.

I Obstetrical and Clinical History.

In 1877, at 27, IV-para was admitted into the Royal Maternity Hospital, Edinburgh, on December 10th, 1872. She had been attended in her own home in the first instance as an out-patient but as a severe haemorrhage was complicating the labour, her attendants, suspecting Placenta Praevia, advised her immediate removal to hospital.

General and Sexual History.

Patient has a comfortable home, is moderate in her habits and of healthy constitution. No history of Syphilis. She began to menstruate at the age of 14½ years, 28 day type,
Duration 4 days, Quantity free. She has had three previous full-time labours and one abortion. First labour was instrumental - March 10th 1888.
Second, normal full-time, Sep 1 1889.
Her third pregnancy ended in an abortion at about the 3rd month, on the 3rd of March.
Cause unknown. Her fourth full-time child was born on the 19th of Jan 1892.
Patient was nursing this child when two months after labour she noticed an apparent menstrual discharge as if the Cataract had set in again. No menstrual phenomena however occurred in the succeeding months and patient states that she quickened in July.

This 5th and present pregnancy proceeded normally (if we except the fact that the patient during the early months did not feel very strong) till the middle of November 1892. About this time patient noticed a very slight blood-stained discharge from the vagina. The amount was so small however that it was paid no attention to.
Hemorrhage recurred on the 1st of Dec.,
when patient had a flooding, losing about
"two breakfast cups full" of blood. As the
bleeding soon stopped she did not send
for a doctor. Ten days later however
as bleeding recurred once more and was
accompanied by labour pains she sent
to the Maternity Hospital for medical
assistance. She was seen, as before
stated, by two senior students, who
from the history and physical signs
diagnosed Placenta Praevia and had
patient removed to hospital.

**Condition on admission and management
of Case.**

Patient is somewhat undersized but well formed, slightly anaemic.
Pulse, Respiration & Temperature normal.
Abdomen enlarged to about the size
of a 1½ months pregnancy. The foetal
heart is heard above and to the
left of the umbilicus.

On vaginal examination the os is
about 2 inches behind and the upper
part of vagina is filled with blood.-
clot. Thro' the 65, especially to the back and left side, a soft mass which appeared to be placental tissue was felt in front of the presenting buttocks of the child. Pelvic measurements showed slight Antero-posterior contraction of the Drim.

But Conjugate 14 inches, Diagonal 15.

On admission the bleeding was found to have ceased so patient was put to bed and some liquid opium given. Slight bleeding took place at intervals during the next two days, and on the 13th Inst after a rather severe loss of blood it was decided to interfere and empty the uterus. Accordingly, at 4.40 p.m. half an ounce of glycerine was injected into the Cervical canal and a small Barnes' bag afterwards introduced. Second size of bag was introduced an hour later. The uterus was now actively contracting and at 8.15 the large bag was expelled from the Vagina. This was followed by a very severe haemorrhage. Dr. Barlow who was in attendance on the case at once
introduced his whole hand into the cervix and tearing thru the placenta, which was almost if not wholly centrally Prævia, seized the legs of the foetus and brought them down outside the vulva. The buttocks of the child thus plugged the cervix and prevented further haemorrhage.

Considerable difficulty was experienced in delivering the trunk, which was noted at the time to be strange as the limbs were small. By strong traction however the body was ultimately born, no difficulty being met with in the delivery of the head. The placenta and membranes came away with the child.

During the dilatation of the cervix by Barnes' tags the patient had not lost much blood, but a very profuse haemorrhage followed the delivery of the Placenta. This bleeding was checked by hot douching and by firm compression of the uterus between the hand externally and a large plug of Iodoform gauge with which the Vagina was packed. The child was
born dead, death having been caused
doubtless by the extensive separation of
the placenta during delivery.
The mother made an excellent recovery
and left the hospital in eleven days.

Morbid Anatomy of Fetus.

External Appearances
The foetus was 14 inches in length and
weighs 3 lb. 3 oz. In development it corresponds
to a 40 1/2 months foetus. The head was
rather small and presented the rounded
unmoulded appearance usual in breech
cases. Circumferences.

Oc. to M. 11 1/2 inches.
" " F. 10 3/4 inches.
Sub-oc. to B. 10 inches.

Extremities fairly well developed, normal.
Abdomen protuberant, flanks bulging.
Circumference at umbilicus 12 inches,
on well below the umbilicus 12 1/2 inches.
Perception more dull all over abdomen.
Thrill of fluctuation very well marked.
The physical signs in short were those
The External Genital Organs of the Foetus in Plate II.

These resemble the male more than the female type. Subsequent dissection showed the child to be a female. The scrotum-like folds are, therefore, the Labia Majora; while the penis-like body is the homologue of the two Labia Minora, fused together and enclosing the Clitoris. The abnormal position of the external opening of the Urethra and the gaping condition of the Anus are to be noted.
of a pretty extensive collection of free fluid in the peritoneal cavity. There was no indication of the subcutaneous cellular tissue of the abdominal walls or other parts of the body.

The **External Genital organs** (Plate II.) resembled those of a male child and indeed until the abdomen was opened the child was thought to be a male whose testicles had not yet descended into the supposed scrotum.

In the usual situation of the penis was a body closely resembling it in size and form, measuring 2 centimetres along its upper surface and 1½ centimetres along its lower surface. Diameter at base three-fourths of a centimetre. At the anterior extremity of this structure was a distinct sulcus which was continued for a short distance along its under surface. This sulcus at a depth of about one millimetre ends in a cul-de-sac. This supposed penis was not therefore perforated by the urethra. From the base of this penis-like body there extended backwards between the thighs two well marked folds of skin which met in the middle line.
posteriorly in front of a small orifice which in its turn lay 1 centimetre in
front of the Anus. These folds were more prominent posteriorly and, looked at from
the front with the body in the erect
posture, closely resembled the scrotum.
These folds were marked off from each
other by a prominent raphe which
extended upwards in the middle line
to the under surface of the penis.

Immediately behind the posterior com-
mixture of these folds, was a small orifice
which admitted with ease the point of
an ordinary surgical probe. The margins
of this orifice were raised & puckered.
A probe passed in without resistance
thus this opening for fully one inch.

The anal orifice was situated two
centimetres in front of the tip of the
ovary; it was gaping and patulous and
admitted the tip of the little finger
without much stretching of its margins.

Such were the appearances on
external examination of the genital
organs. The configuration of the parts
Strikingly resembled those of the male type and it was only on subsequent dissection that the true morphology of the parts was made evident. This subject will be taken up later in connection with the description and dissection of the internal genital organs.

**Internal Appearances.**

On opening the abdominal cavity by means of an incision mid-way between the umbilicus and the Symphysis pubis, 300 Cubic Centimetres of a straw-coloured, slightly turbid fluid escaped, the turbidity being due to small flakes of lymph. The fluid which drained away last contained some larger gelatinous flocculi.

The omentum was thickened and retracted. The parietal peritoneum was of a dull gray colour and had lost the normal glistening appearance of the healthy peritoneum. It appeared to be much thickened and felt granular and irregular. The peritoneum lining the anterior abdominal wall was thickly studded with small grayish-coloured tubercles about the size of a pin's head.
the appearances here in fact were very much those of an early tuberculous peritonitis in the adult. The peritoneum covering the small intestines seemed thickenes but had the normal glistening appearance. The mesenteric however was much thickened and retracted. There were a few recent lymph adhesions between the coils of the small intestines and between the under surface of the liver and the small intestines.

The Liver. was not enlarged, its weight and measurements were unfortunately not taken before parts had been removed for microscopical purposes, its capsule was smooth and though it seemed thicker than normal it was stripped off readily. The under surface of the liver was covered with recent lymph fluid which it was slightly adherent to the coils of small intestine which lay beneath it. These adhesions were very delicate and were easily torn through. The portal vein as far as I could judge was normal.
The Gall Bladder contained a small quantity of bile.
The Spleen was of normal size. Its capsule was distinctly thickened and covered with a layer of lymph. The Kidneys and Supra renals were perfectly normal. Kidneys slightly lobulated.

The Intestines. The coils of the small intestine were gathered in a bundle towards the upper and left side of the abdominal cavity. The coils as before stated were in parts slightly adherent to each other and to the left lobe of the liver. Owing to the thickening and retraction of the mesentery, the range of mobility of the intestines was very limited. The large intestine contained meconium in all its length. The ascending colon—and also the descending—was firmly bound down to the posterior abdominal wall by the thickened peritoneum which covered there. The sigmoid flexure was not very well marked. The descending Colon
Pelvic Organs of the Fetus in Plate I. (Seen from above).

This plate shows a striking abnormality in the conformation of the Uterus. The condition is too complex to make an abbreviated description useful. The detailed account is given in the text, pages 10.
passing obliquely inwards towards the middle line to become continuous with the rectum. The loop of sigmoid figure described by Ballantyne, which he noted in all his dissections passing down into the pelvis, was not present.

Pelvic Organs. (Plate III.)

The Rectum passed down into the pelvis almost in the middle line between two well marked folds of Peritoneum which stretched from the back wall of the pelvis forwards to the upper angles of a pear-shaped body which lay in front of the Rectum and was closely applied to the posterior surface of the bladder. The peritoneum covering the rectum dipped downwards into the pelvis for a distance of 1.5 cm. and was then reflected over the posterior wall of the bladder covering in its course the pear-shaped body before mentioned which lay on its posterior surface. A well-marked pouch — Pouch of Douglas — was then formed whose upper margins were
constituted by the two folds of Peritoneum before mentioned. These folds would represent therefore the Utero-Sacral ligaments. The body which lay on the posterior surface of the bladder was the imperfectly developed Uterus. As before stated, it was somewhat triangular in shape. Its posterior surface was convex and bulged towards the rectum. The Uterus was cystic and was evidently distended by some fluid. Its upper border presented a well marked concavity unlike the rounded convex fundus of the fully developed Uterus. The upper angles were prolonged into two horns—two centimetres in length, 3 centimetres broad—which passed horizontally outwards along the posterior surface of the bladder and the anterior abdominal wall beyond this. These horns were also cystic, like the triangular body with which they communicated and which would represent the Cervix Uteri. Each horn
tapered slightly towards its distal extremity and then became continuous with a narrow convoluted structure two and a half centimetres long and about one millimetre broad—the Fallopian tube. These tubes were, like the distal ends of the horns of the uterus, closely applied to the posterior surface of the Anterior abdominal wall at a distance of five millimetres above the pelvic brim. The ovaries lay at a slightly lower level on each side. It was also adherent to the Anterior abdominal wall and extended outwards horizontally, its inner end being in relation to the uterine horn of that side; its outer end was closely connected with the distal extremity of the Fallopian tube. The ovaries were pale in colour and of the characteristic elongated shape of the foetal surface, length two centimetres, breadth two millimetres. No finitude were to be seen on the distal end of the Fallopian tube.

The Bladder contained a few
drops of clear fluid which escaped when the bladder was opened at a later stage of the dissection. It lay almost entirely above the pelvis rim; its cavity measured three centimetres in length. Its anterior wall was closely applied to the anterior abdominal wall, the peritoneum being reflected from its fundus directly on to the wall of the abdomen. The whole anterior surface of the bladder was therefore uncovered by peritoneum. The distance between the fundus of the bladder and the upper border of the rudimentary uterus attached to its posterior surface was two centimetres.

The internal genital organs were therefore undoubtedly those of a female; and a careful dissection was now made in order to discover the relation of these parts to the external genita which as we have seen resembled very closely those of a male. The only thing which
could at all correspond to the external opening of a vagina was the small orifice with raised margins, in front of the anus. (Plate II.)

An ordinary surgical probe was passed through this orifice with great care, no force being used, until resistance was met with at a depth of 3½ centimetres. The penis-like body was then cut through transversely at its base and a careful dissection made down thru the Symphysis pubis to the neck of the bladder. When the dissection had reached this stage it was recognized for the first time that the opening through which the probe had been passed was the external opening of the urethra, not of an imperfectly developed vagina. As the probe could be felt inside the bladder, to make sure however the bladder was opened from above and the end of the probe could be seen in the bladder cavity.

The Urethra was next carefully
Soft Parts of Pelvis of Foetus in Plate IV.

This Plate shows the soft parts removed from the body, as seen from the front. The Bladder and Urethra are laid open. The Cavity beside the Urethra is the Right Vagina also laid open. The dark line passing behind the Bladder indicates the extension of this Cavity upwards to Communicate with the Right Horn of the Uterus. The Vagina ended below in a cul-de-sac. The skin surface of the Perineum has got turned too far forwards.
opened along its entire length by cutting down on the proct as it lay in the caudal. The Urethra was almost vertical in direction; its length was three centimetres. The soft parts were now taken out.

When the Urethra has been laid open, a small opening was seen on its posterior wall about two millimetres in front of the entrance of the Urethra into the Bladder. It was detected by noticing that a little curdy mucus exuded from it as the parts were handled. This opening, which was more of the nature of a slit than an orifice, was I am sure not artificially made during the dissection. The Urethra communicated through this opening with a cavity which extended downwards almost vertically towards the Anus and ended in a cul-de-sac in front of the Rectum about one centimetre above the anal orifice. This cavity extends upwards behind the posterior wall of the Bladder and
The same Parts as in Plate IV., the Bladder turned forwards.

This Plate shows the extension of the Right Vagina upwards behind the Bladder, and its communication with the Right Horn of the uterus. It will be noted that the trivule passed thru the Left Horn does not communicate with this Vagina.
communicated with the Right horn of the rudimentary uterus. *Plate V.*

It did not communicate at all with the left horn. It measured from the internal opening of the uterine horn above, to the cul-de-sac below, three centimetres and when laid open its wall was two centimetres broad below but narrower above. The internal surface of this cavity was smooth in its lower half but above it was marked by numerous transverse rugae.

To the left of this cavity and posteriorly to it, was another one similar, separated from it by a thin septum. This second cavity like the first ended below in a cul-de-sac in front of the anterior rectal wall a little above its lower end. As it passed upwards, it came to lie quite behind the first cavity and at its upper end communicated with the lumen of the left horn and had no communication at all.
The open sac is the extension upwards of the left vagina, which is thus seen to be posterior. It was this sac which formed what seemed to be the body of the Uterus, (Plate II 'Posterior Surface of Uterus'). It is composed partly of Cervix and partly of Vagina. The extent of the Cervical portion is indicated by the prominent median raphe on the posterior wall in the upper part. The cavity ended in a cul-de-sac below, a little above the lower end of the Rectum. It communicated by a small orifice on its anterior wall with the Urethra. Above, it communicated with the left horn of the Uterus.
with that of the right. This second cavity was slightly longer than that first mentioned and was more distended with thick curdy mucus than the first had been. It was the posterior wall of this cavity which bulged towards the rectum* so that its upper part would probably represent the cervix uteri. This view is supported by the fact that the upper two-thirds was markedly rugose, the ridges being arranged in the characteristic form known as the Arbor vitæ, numerous transverse rugae passing out horizontally from a prominent longitudinal and mesial ridge. In the lower third, the longitudinal ridge was wanting and the transverse ridges were much less prominent. This second cavity also communicated with the urethra by a small opening on its anterior wall at its lower end.

There was thus a double vagina, half each of which ended in a cul-de-sac below and communicated by
a small opening with the tuberous
canal. Towards the upper end, each
tubo-communicated with a horn
of the imperfectly developed uterus, that
anteriorly and to the right with the right
horn, that posteriorly and to the left with
the left horn. From the arrangement
of the vagina however we have seen
that the cervical canal forms the
upper two-thirds of each cavity, and the
tubo-communicates with separate horns of the uterus
by means of the cervical canal
belonging to each.

Microscopic Appearances.
The liver (slide A) is normal. There is no
increase of the connective tissue; the few
leucocytes which are present in the wide
capillaries are of course a normal condition
at this stage. For purposes of comparison
I send a strip (slide B) a specimen of liver
from a healthy full time foetus, which
Microscopic appearances of Abdominal wall of Fetus in Plate I.

Fig. 1 shows a microscopic section of the abdominal wall internal to the muscular layer under a low power and stained with hogenous resin.

Fig. 2 shows the appearance of that part of the Abdominal wall which is next the Peritoneal cavity (as of Fig. 1) under a high power.

For detailed account see text page.
died in consequence of a very difficult labour.

Spleen (Slide C) and Kidney (Slide D) are perfectly normal.

Abdominal wall (Slide E). The skin surface is normal and consists of four or five layers of cells, the outer one being somewhat flattened. The subcutaneous tissue shows nothing abnormal: Already there is a considerable development of fat; the tissue shows infiltration with leucocytes in places.

Muscle (Plate VII Fig. 1, a.). Muscle fibres are well shown in the section; capsule in part thickened; there is a good deal of leucocyte infiltration. Internal to the muscular layer there is a marked and evident thickening (Plate VII Fig. 1, c) which even under the low power is seen to be divided into two distinct layers (a, β). Between a and c there is a layer of loose areolar tissue (Plate VII Fig. 1, b). In this areolar tissue are numerous leucocytes surrounding the small blood-vessels, and groups of fat cells.

Sub-peritoneal Connective Tissue (Plate VII Fig. 1, c).

The outer layer a. is from 2 to 3 mm. broad.
it consists of a dense mass of connective tissue
with small interstices in which are seen
small spindle-shaped connective tissue cor-
puscles. The intercellular substance shows
slight fibrillation and has a somewhat
swollen appearance. Leucocytes are present
in small numbers. This outer layer is sep-
parated from the inner by a thin delicate
layer in which are seen numerous blood-
vessels, young connective-tissue corpuscles,
and masses of leucocytes. (Plate VII Fig. 1)

The inner layer (Plate VII Fig. 1 B), stains
more deeply with eosine than the outer.
It is from 0.5 to 0.6 mm. broad and can
be divided into an external part, and
an inner (Plate VII Fig. 1 B1 and B2).
The external part has a selective appearance,
the intercellular substance being very dense.
In places it seems to be undergoing a
degenerative change of a hyaline nature.
In its inner part the tissue is less homo-
genous and appears to consist chiefly of
irregularly swollen and degenerated masses
of intercellular substance which stains for
the most part deeply with eosine (Plate VII Fig. 2).
In some places there are masses of degenerated tissue slightly resembling giant cells. Here and there leucocytes are seen, and capillaries much compressed with their lining endothe-lium swollen. The surface next the peritoneal cavity is in some places fairly smooth, in others where the degeneration of the connective tissue is most marked it is ragged looking. In no place can the flat peritoneal epithelial cells be seen.

The change is evidently one of Chronic inflammation of the superficial layer of the Peritoneum, which has resulted in the complete loss of the Endothelium and in a great thickening of the Sub-endothelial connective tissue. This has apparently been in a state of active growth at some early stage and the superficial layers of the new formation have become materially degenerated. The bluish appearance of the young connective cells may with plausibility be ascribed to the soaking they have undergone in the fluid which was in the peritoneal cavity.

The Placenta and Cord. The placenta,
which was attached to the lower uterine segment, was of course much torn during the delivery of the child; it was otherwise normal. Nothing unusual was noticed in connection with the umbilical cord.

Remarks: Summary.

The chief points of interest in the foregoing case are 1st The complication of the labour arising from the abnormal situation of the Placenta, 2nd The difficulty met with in delivering the trunk of the child, and 3rd The morbid anatomy of the foetus.

I. The complication of the labour due to Placenta praevia. This point has no bearing on the subject of the present paper, so we content ourselves with merely mentioning it.

II. The difficulty met with in delivering the trunk of the child. As we shall see later it is this difficulty, due to the abnormal size of the foetal abdomen, which is the first indication to the accoucheur that Ascites is present.
The labour proceeds normally during the earlier stages, the head and shoulders are soon born and then, depending on the degree of the ascites, the rest of the body is extracted either only after strong traction or it is found impossible for this to be accomplished until the abdominal wall of the foetus is punctured and the fluid evacuated. In the foregoing case the pelvis of the mother was small, otherwise the degree of distension of the child's abdomen was not sufficient to have caused much difficulty.

III. The Morbid Anatomy of the Foetus.

This may be briefly summarised under two heads: 1) The condition of the Peritoneum, and 2) The Genital organs.

1) The changes in the Peritoneum were evidently those of a Chronic Peritonitis. As a result of the Peritonitis there was a mere mark of Ascites.

2) The Genital organs. The condition of these organs presents many points of interest which can only be briefly referred to here. The process of dev-
Development has evidently been arrested before the Müllerian ducts have coalesced and while these structures were still in connection with the Allantois. As a result of this we find those structures which are developed from the lower part of each duct, viz. vagina, cervix, and uterine horn, remaining separate on each side. In addition however the left Müllerian duct has come to be placed posteriorly to the right; and therefore we find the one vagina anterior and to the right, the other posterior and to the left.

Sir J. Y. Simpson in his article on Foetal Peritonitis, after stating that he has observed in different specimens as early as the 3rd month, "unequivocal evidence of inflammation," goes on to state his belief that "we may yet be able to trace many of the malformations of the abdominal and pelvic viscera... to different diseases actions, but particularly to inflammation occurring in some of their structures during the
Transverse Section of Penis-Like Body Seen in Plate II.

The bulk of the structure is composed of loose connective tissue which gets denser towards the centre. In the denser area numerous small nerves are seen cut in transverse section. The canals in the centre are surrounded by non-striped muscle and are lined by cubical epithelium. On either side of the Canal is an area of cavernous erectile tissue.
earlier stages of their embryonic development and growth. In our own case we think it is very probable that both the arrest of development and the displacement of the Müllerian ducts were produced by the Peritonitis which was of undoubtedly long standing.

As regards the external genitals it would seem that in the process of development of the genital tubercle the margins of the Urethral groove, which exists in the Citeria as in the penis at an early stage of embryonic life, have united, instead of developing into the elevated ridges which subsequently form the labia minora. The uppermost part of this primitive Urethral groove has thus been converted into a canal which still persists—divided by a septum as is seen in Plate VIII. This canal is obliterated towards its lower end, so that the penis-like structure (Plate II p.16) is solid at its base. This pseudo-penis therefore represents the two labia minora, whose margins have united except at the apex where there is a
sulcus (Plate II.). In this structure is excluded the hypertrophied but irregularly developed Clitoris.

III.

Intra-Uterine Ascites

Considered as a cause of Dystocia

Intra-Uterine Ascites is a rare disease of the Fetus but when it does occur the distension of the abdomen which it produces may form a complete obstacle to delivery and necessitate operative interference. As a cause of Dystocia therefore the subject is one of considerable interest and importance. The degree of difficulty which is met with in delivering an Ascitic Fetus depends of course on the amount of fluid which is present. This varies in the 63 cases I have collected from a few centimetres to five or six litres. In many, the amount has not been measured, the fluid escaping on to the bed clothes after puncture, and the degree of distension
could only be estimated by noticing the stretched and collapsed condition of the abdominal walls or by refilling the peritoneal cavity after delivery had been accomplished. In my own case, where only 300 cubic centimetres of fluid were present, the abdomen of the foetus was markedly distended measuring 12 inches in circumference at the level of the umbilicus, and this degree of distension was sufficient to cause some difficulty in delivery. How complete the obstacle must be where several litres are present can be easily imagined. So great indeed may the accumulation of fluid be, that in six of the cases—Windsor (Case 4), Depane (Case 15), Hollein (Case 39), Ashteton Thompson (Case 42), Bentlow (Case 53), and Peters (Case 57)—the observers noted that although the liquor amnii had escaped for some time the abdomen of the mother was still very large, and it was only after the hands had been introduced into the uterus for
The purpose of diagnosis that this unusual size of the abdomen was found to be due to the distention of the uterus produced by an ascitic foetus.

In other cases the fluid is not present in such quantity as to form any serious impediment to labour and the presence of ascites is only discovered after delivery has been accomplished. Many such cases have doubtless never been recorded.

When, as in the first group, the ascites is well-marked, the abdominal walls of the foetus form a very resisting sac which no amount of traction will cause to rupture—at least the force that would be necessary is more than sufficient to first of all tear away the parts on which traction is being made, e.g. the arms, legs or head of the foetus. Of the thirty-three cases, operative interference was necessary to effect delivery in thirty-two. In twenty-eight, traction was alone used to overcome the obstacle. Though many of these delivery was accomplished by only with great difficulty.
This means. Of the remaining three cases, one occurred in a foetus that was delivered by Caesarean section and the distension of the abdomen was so great that puncture would certainly have been necessary in order to evacuate the fluid which was present in very large amount—3-4 litres. (Hence Case XIII.) had the foetus been born per vaginam naturales; the two others are museum specimens of which I can get no clinical history.

The case I have quoted in full in the introduction to this paper is a very fair example of the clinical history of many of the recorded cases of Dysaesthesia arising from Ascites of the Foetus. From the very rarity of its occurrence, the real nature of Dysaesthesia from this cause is apt to be overlooked and treatment adopted as a result of a mistaken diagnosis which, while quite ineffectual in overcoming the impediment to delivery, is apt to be attended with disastrous
results to the patient. If in a labour which has probably set in prematurely the head of the child has been born or the lower limbs been brought outside the vulva, and the distended abdomen of the foetus prevents further descent, even should ascites be suspected, it is not always easy to verify the diagnosis; for in either case the particular cause is occupied by some part of the foetus which has descended into the pelvis, the throat in head cases, and the neck in foot cases. An unskilful attendant would therefore find considerable difficulty— if it were not altogether impossible—in passing the hand as far as the abdomen of the foetus in order to palpate it. The most natural thing to do therefore in such a case is to make traction on that part which is born, with what result the record of the cases shows very well. In vertex presentations, the cervical vertebrae give way and the head finally is altogether dragged off. The arms are then brought down and they too are
dragged off. In these cases, first one limb
and then the other is unraveled away.
Generally at the knee. Then when there
is nothing further on which to make
traction some one more skilled in the
Obstetric art is called in, who recognizes
the cause of the obtrusion to lie in
the distended ascitic abdomen of the
foetus and adopt appropriate treatment
and the patient is soon delivered.

This history of mistaken diagnosis
and mal-treatment by prolonged and
severe traction is repeated over and over
again in the cases I have collected.
It is not surprising therefore to find the
maternal death rate in these 64 cases
very high. In Ballantyne's case (No. 64.)
the mother died of Peritonitis on the second
day of the puerperium, but death in this
case was caused by the rupture of a
Gonococal tube during labour which
set up a fatal peritonitis; in four
other cases, however, the mothers died
as a direct result of the severe labour
or the prolonged and harsh treatment
to which they had been subjected. In Trendel’s case (No. 10) the patient died the day after delivery from shock and peritonitis; in case No. 140 death took place in a few hours from shock and rupture of the uterus; in case No. 140 (Ashburton Thomson) the patient died in 95 hours, cause of death being Pyaemia; in case No. 51 (Preston) the uterus was ruptured and the patient died from peritonitis and secondary haemorrhage on the 5th day of the puerperium.

In two cases, Trendel’s (No. 10) and Ber. Rodo’s (No. 51), the puerperium was complicated by pelvic inflammation. In very many of the cases however no mention is made of the history of the mother subsequent to delivery; but from the accounts of the labourers it is to be feared that, to say the least, the puerperium cannot always have been normal.

In thirty-two cases of Tocolae Asciile thereore where operative interference was necessary to effect
delivery, the maternal death rate is 12.5%, a death rate which renders ascent of the fetus a subject of no mean importance to the obstetrician. This high death rate is of course in part explained by the fact that in all these cases the patient has been subjected to prolonges and very rough treatment by their attendants—generally inexperienced midwives—before operative interference has been resorted to; and there is no reason to suppose that all might not have lived had proper treatment been carried out at first.

As regards the foetus, the prognosis is of course most unfavourable. Apart from the operative interference which is so often necessary and fatal, the child's chance of life is very small even should it survive the labours.

Malpresentation is not infrequent and complications may arise from this cause. Of the sixty three cases I have collected, ___________

The foetus presented in 39,
The Breech presented in 12.
"Face " 3.
Presentation is not mentioned in 9.
Prolapse of the cord is noted three times.

In the thirty two cases where puncture was necessary to effect delivery, the foetus, if not already dead as a result of the disease causing the Ascites or the treatment which had been adopted before puncture, dies in consequence of the operation. Of the remaining thirty five, all dies very shortly after delivery excepting two—Craundall's (Case 4V.)
and Cour-mont's (Case 58 VIII.)

In Craundall's case the head and shoulders of the foetus were easily expelled but it was very difficult to extract the rest of the body because of the abnormal size of the abdomen.
The child was emaciated when born and presented all the physical signs of Ascites and there was great dyspnœa evidently due to the impedes action of the diaphragm.
A Capillary puncture was made
through the abdominal wall and some clear amber colored fluid drawn off which was not urine. The child was slightly jaundiced but, apart from this and the ascites, appeared to be healthy. Cudmore at first thought of aspirating the ascitic fluid but finally decided to leave matters to nature and gradually the size of the abdomen diminished and in 14 days it was normal. The child then took capillary bronchitis and died in five days. Cowan's case is somewhat similar. The child was born with a greatly distended abdomen and was very much enlarged. By immediate puncture of the abdomen 500 grammes of fluid were with drawn and at once a marked improvement in the child's condition took place. The fluid was analyzed and was evidently ascitic.

These are the only two cases on record as far as I can find
where a foetus born with ascites did not die either during and as a result of labour, or very shortly after birth. The favourable termination of these two cases suggests the possibility of treatment which may, out of necessity, be attended with fatal results. This point will be referred to later under the head of treatment.

**Diagnosis.** In the majority of the cases nothing unusual has been noted in the condition and feelings of the mother during the pregnancy which resulted in the birth of an ascitic foetus.

In ten out of 61 cases where we have information on the point, the mothers were primiparae, ten II-para, five III-para, six IV-para, three V-para, five VI-para, four VII-para, three VIII-para, six more than VIII-para. The ages of the mothers varied from 14 to 42 years.

In eight out of the 63 cases, the mothers were syphilitic. This fact is of considerable importance as we will see when we come to consider the Etiology of Infantile Ascites.
one of the manifestations of Syphillis in the fetus being peritonitis, and peritonitis we consider to be one of the most important and frequent causes of ascites of the fetus. In five of the recorded cases the fetus was one of twins. The frequency of accompanying hydroamnios, 19 times out of the 63, is also noteworthy; and this seems a more constant symptom than any other, but it must be remembered that excess of liquor amnii is a frequent accompaniment of other diseases and malformations of the fetus and for this reason its importance as a symptom in ascites is without much value.

Virchow (Case XXI.) states that the mother complained of a feeling of heaviness over the lower part of the abdomen; Keillor (Case XXIII.), that the mother complained of pain over the lower part of the abdomen; King (Case XXXVII.), that the mother had complained of pain peritonite
in character; Simpson A.R. (Case XLIII),
that the mother complained of pain
in the abdomen during the later months
and had been treated for deep seated
peritonitis. In Ballantyne's Case (No.
65), the mother suffers from Gonorrhoea
and the author suggests the transmission
of the virus from the mother to the
child, as a cause of the peritonitis
which he found present; Sir J Y
Simpson (Case XXXVII) notes that the
foetal movements were hardly felt
by the mother for a few days before
the onset of labour. This sudden
cessation of foetal movements, especially
when preceded by a great but tempo-
rary increased degree of these motions,
he regards as a not infrequent
combination of symptoms in cases
of foetal peritonitis.

The above are examples of the
observations made on the condition
and feelings of the mother during
pregnancy; and it will be readily
seen that they are of little value.
in forming a diagnosis of the condition under consideration.

Two other interesting facts may be mentioned here. The first is that occasionally it has been noticed that congenital ascites recurred in the children of the same woman. In Dr. Chure's case (No. XXI) the mother had given birth to an ascitic foetus on three former occasions; in Franchi's case (No. XXXII) twice previously; in Bruce's case (No. XXXIII) once before and in Jillic's case (No. LIX) once before.

The second fact is that in forty-five cases where the date of the onset of labour is mentioned, in thirty-six it took place prematurely. Generally about the 7th month. In nine only did the gestation run its full course of nine months.

We have therefore no facts which will enable us to form a diagnosis of foetal ascites during pregnancy. Neither can we expect to do so in the earlier stages of labour.
we may note in passing that observers have, in some of the cases, been struck with the fact that, after the liquor amnii had drained away, the abdomen of the mother still remained very large, and that, subsequently this enlargement was found to be due to the distension of the uterus, by an ascitic fFuid. This, however, cannot be of much value as a diagnostic sign, unless our attention has been directed towards the possible occurrence of the ascites. Before hand, by some striking combination of the symptoms we have mentioned during the pregnancy; for if we seek for any explanation of the unusual distension, we should naturally expect some condition more frequent than ascites e.g. twining. Such cases as that of Peters (Pro EVII), where he was able to palpate, during labour, the head of the child above and the treeth below, and recognise the balloon-like swelling of the ascitic abdomen between them, must be
rare. To be able to diagnose ascites of the fetus while it is still in utero by palpation of the maternal abdomen must at all events require what our French confrères call "une grande habitude de palpier."

It is not till labour has been in progress for some time that the condition is recognized and then only if the ascites is present in such a degree as to prevent the distended abdomen from passing through the brim of the pelvis. The attention of the accoucheur will be for the first time in all probability directed towards the condition by some delay in a labour which has proceeded rapidly and easily in its earlier stages. In vertex presentations the head has been born or has come down to the perineum and, in spite of strong uterine pains aided by traction from below on the presenting part, no advance is made. In breech cases the lower limbs may have been born
naturally or been pulled down, traction is made but as in the former cases, the rest of the body cannot be delivered. In both, the difficulty will seem all the more strange as he has probably to do with an immature foetus, e.g., my own case. Whence then the difficulty? Does the fault lie in the powers, the parages or the patient? The Powers are excluded; because pains are strong and the traction he has made on the limbs would have been more than sufficient to have delivered the child in a normal case independent of uterine action or voluntary efforts on the part of the patient. As regards the Parages, examination in the earlier stages of the labour has probably shown them to be normal, but apart from this the descent of the head and shoulders to the pelvic outlet excludes any abnormality of the pelvis as being the cause of the Dystocia. In this way he can only look for the cause of the Difficulty in the
in the Foetus.

The阿科列克 women now consider what conditions of the Foetus cause dystocia. Hydrocephalus is readily excluded. If he has to do with a normal presentation the head will have already passed the brim; in a Breech case, the difficulty is encountered before the head has come into relation with the brim. Tumours and Malformations of the Thorax, he will exclude for the same reasons. Locked Fruits, some monstrous, distension of the abdomen or a tumour in connection with the lower half of the trunk of the foetus are the remaining possibilities. He really cannot differentiate between these until he has passed his hands up into the uterus. Then on coming to the abdomen of the Foetus he will at once find that it is its abnormal size which prevents its passing through the pelvic brim and has rendered impossible the delivery of the trunk. From the fluctuating nature of the tumour he will readily recognise that the distension
4. Duffey, Medical Times, 1866, Feb. 10th.
6. Nögnerath, Deutsche Klinik, 1874, No. 44.
is due to some fluid accumulation. Whether free or encysted (e.g. in the Bladder) it will be impossible to deter-
mine; practically it does not matter — the treatment necessary in both cases is the same.

Such are the steps by which the diagnosis of Foetal Ascites obstructing Labour will usually be made. It
may happen, however, that owing to the impaction of the thorax of the child in the pelvis one may find it quite
impossible to pass the hand into the uterus and, though the distension of the abdomen may be suspected, its
cause cannot be definitely ascertained.

The conditions which may lead to an enlargement of the abdomen of the foetus are various. Inæge records a case
where the enlargement was due to the great size of the kidneys. Similar cases are recorded by Siebold, Wolff,
Brückner, Duffy & Wilson (see over).

In Nøggerat's case there was an enormous tumour of the liver.
Petit-mheur, see Case VIII, Part II.


Phaeolomow Arch. fur. Gym. XVII, p. 133.
Petit inquin(6) records a case of distension of the abdomen, by an enormous spleen; Rogers(5) by a tumour of the testicle which had been retained in the abdomen; Phæromenour(3) by an aneurism of the aorta. The distension of the urinary organs with urine as a result of atresia of the urethra or great narrowing of its canal is, after Acestes, perhaps the most frequent cause of unusual enlargement of the foetal abdomen. This condition is very frequently associated with ascites and several cases are therefore included in the list of cases of ascites that I have collected. E.g. Porah's case (No XV), Matthews' Dunlop's case No XXX.I.

Corner Davies records a case of great abdominal distension from an unusual cause. The child was a female and its abdomen was chiefly occupied by a tumour which resulted from the impervious vagina being filled with fluid. Cases of abdominal enlargement due to distension of the uterus are
recorded by Obhauken and Servis. Both of these were accompanied by ascites and are included in my list. (Nos. XXXIII and XXII).

What we would suggest is, that in all such cases where the exact cause of the enlargement of the abdomen cannot be ascertained, the possibility of ascites or some other fluid accumulation should be kept in mind; and that before proceeding to embroyotomy the practitioner should pass a trocar thru the diaphragm of the foetus if the abdominal wall cannot be reached so that, if fluid is present it may be evacuated and thus obviate the more serious operation of embroyotomy.

**Treatment.**

From what has been said it will be seen that the Treatment - the only Treatment - for grave dyspepsia arising from ascites of the foetus is evacuation of the fluid. How this may be best done each case will almost determine for itself. In some
cases, where the child is very small, one may be able to carry a bistoury or trocar up to the abdominal wall and puncture it, or even to scrape through the wall with the finger nail, as in cases of great distension it has been noticed that the abdominal parietes are much thinned out, as in Depauli's Case (No. XXIII). In other cases, where the hand cannot be passed up to the abdominal wall it may be necessary to evacuate the fluid by means of a puncture through the diaphragm. Sometimes this may be effected by simply passing a long trocar through the thorax into the abdomen; but, as this most likely we have not such an instrument at hand but have to use a knife or pair of scissors, it will be necessary in the first place to eviscerate the thorax before puncturing the diaphragm, so that the fluid may be freely evacuated.

In Breech cases, there is likely to be less difficulty both in diagnosis
and in puncturing the abdominal wall.

If one has to do with a male foetus, the possibility of a communication between the general peritoneal sac of the abdomen and the tunica vaginalis testis, being still present, should be kept in mind. Aubenas' case (No XXX) is very interesting in this connection. In a breech case after having brought down the feet he found further delivery was impossible because of the distension of the abdomen by ascites; the serotum too was greatly distended and after it had been punctured with a bistoury not only the fluid in the serotum was evacuated, but also so much of that in the general peritoneal cavity that the child was readily born.

In puncturing the abdominal wall it is necessary to take precautions against injuring the soft parts of the mother. This will best be done by using a trocar and choosing as the point of puncture the insertion
of the umbilical cord. Whatever instrument is used, this landmark ought to be clearly defined by the fingers of the right hand passed into the uterus. The left hand guides the perforator along the right up to this point and in this way the maternal caesals are best prevented from injury, and the possible mistake avoided if puncturing the abdomen of a second foetus or the wall of the uterus.

In all the cases I have collected where operative interference was had recourse to evacuate the fluid, the methods employed caused necessity the death of the foetus. The cases of Cruadelle (No. LV.) and Courmont (No. LVIII.), however, suggest a method of treatment as a result of which the life of the child need not be inevitably lost. Paracentesis abdominis is by no means a dangerous operation in the adult; if it is carried out on the foetus still in utero by means of a fine
Reform. Progrès Médicale, April 1884
trocar there is no reason to suppose that it might not be done in many cases successfully. Such cases are those of Simple Ascites without any gross pathological lesion of the Visera, and some cases of distension of the Bladder by Urine. In the majority of the cases where a distended Bladder necessitated the cistotomy, the condition was accompanied by atresia of the Urethra and other malformations, which would probably have proved incompatible with life whatever treatment had been adopted. In others however, e.g. that recorded by Lefour, and Jamy's (No XXXIII) the urethra was quite patent and it seems reasonable to suppose that if these and others similar puncture by means of a fine trocar had preceded cistotomy the children might have lived and been useful members of society.

The chances of success in this operation are increased when we
remember that the whole Anterior surface of the Bladder is in the fetus uncovered by peritoneum. To diagnose between a distended bladder and an accumulation of free fluid in the peritoneal cavity is hardly possible while the fetus is still in utero. Practically it is sufficient that we know the distension is due to fluid; the point we would insist on is that in such cases the evacuation of this fluid by a free trocar is the best treatment: for in some cases few in number perhaps—the life of the child need not be inevitably lost if the usual methods of puncture by scissors perforator or bistoury are avoided.

With regard to Treatment it should also be noted that a double puncture may be necessary in those cases where Ascites is associated with distension of the Bladder; the first evacuating the fluid contained in the peritoneal cavity, the second the fluid contained in the Bladder.
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<tr>
<td>XVI</td>
<td>rotkansky</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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</tr>
<tr>
<td>XVII</td>
<td>moreau</td>
<td>I</td>
<td>7th</td>
<td>Terley</td>
<td>--</td>
<td>Necessary</td>
<td>--</td>
<td>Death</td>
</tr>
<tr>
<td>XVIII</td>
<td>carpentier</td>
<td>42</td>
<td>XII 8 1/2</td>
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<td>Necessary</td>
<td>Pneumonia &amp; Diaphragm</td>
<td>Death</td>
</tr>
<tr>
<td>XIX</td>
<td>keiller</td>
<td>--</td>
<td>8 1/2</td>
<td>Terley</td>
<td>--</td>
<td>Not Necessary</td>
<td>Normal</td>
<td>Death</td>
</tr>
<tr>
<td>XX</td>
<td>firewirth</td>
<td>30</td>
<td>VII 7 1/2</td>
<td>Yes</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>XXI</td>
<td>braxton hicks</td>
<td>36</td>
<td>II 7 1/4</td>
<td>Terley</td>
<td>Yes</td>
<td>--</td>
<td>--</td>
<td>Death</td>
</tr>
<tr>
<td>Number</td>
<td>Name of Observer</td>
<td>Age of Mother</td>
<td>No. of Pregnancy</td>
<td>Date of Onset of Labour</td>
<td>Presentation</td>
<td>Puerperal or Not</td>
<td>Operative Interference</td>
<td>Result to Child</td>
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<tr>
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<td>------------------------</td>
<td>--------------</td>
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<td>-----------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>XXII</td>
<td>Gervis</td>
<td>28</td>
<td>III</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Normal, Died</td>
</tr>
<tr>
<td>XXIII</td>
<td>Jarry</td>
<td>28</td>
<td>III</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Died, born after</td>
</tr>
<tr>
<td>XIV</td>
<td>Martin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Necessary</td>
<td>Death</td>
</tr>
<tr>
<td>XV</td>
<td>Yoss</td>
<td>30</td>
<td>V</td>
<td>8½ M</td>
<td>Breech</td>
<td>Yes</td>
<td>Necessary</td>
<td>Normal, Died</td>
</tr>
<tr>
<td>XVII</td>
<td>Franquè</td>
<td>22</td>
<td>I</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Died, took 7 days</td>
</tr>
<tr>
<td>XVIII</td>
<td>Schraeder</td>
<td>17</td>
<td>I</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Died, in 35 days</td>
</tr>
<tr>
<td>XX</td>
<td>Bruce</td>
<td>-</td>
<td>III</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Death</td>
</tr>
<tr>
<td>XXXII</td>
<td>Matthew Dunner</td>
<td>30</td>
<td>III</td>
<td>8½ M</td>
<td>Breech</td>
<td>Yes</td>
<td>Necessary</td>
<td>Death</td>
</tr>
<tr>
<td>XXXIII</td>
<td>Robert</td>
<td>20</td>
<td>III</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Died, soon after</td>
</tr>
<tr>
<td>XXXIV</td>
<td>Robert</td>
<td>26</td>
<td>III</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Died, in 50 days</td>
</tr>
<tr>
<td>XXXV</td>
<td>Schraeder</td>
<td>35</td>
<td>V</td>
<td>8½ M</td>
<td>Breech</td>
<td>-</td>
<td>Necessary</td>
<td>Normal, Died</td>
</tr>
<tr>
<td>XXXVI</td>
<td>Sir J. Simpson</td>
<td>-</td>
<td>IV</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Died, soon after</td>
</tr>
<tr>
<td>XXXVII</td>
<td>King</td>
<td>-</td>
<td>I</td>
<td>1½</td>
<td>Face</td>
<td>-</td>
<td>-</td>
<td>Born, Died</td>
</tr>
<tr>
<td>XXXVIII</td>
<td>Olszewski</td>
<td>-</td>
<td>X</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Normal, Died</td>
</tr>
<tr>
<td>XXXIX</td>
<td>A. H. Lein</td>
<td>34</td>
<td>VII</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Death</td>
</tr>
<tr>
<td>XL</td>
<td>Porak</td>
<td>35</td>
<td>VIII</td>
<td>1½</td>
<td>Face</td>
<td>Yes</td>
<td>Necessary</td>
<td>Death from shock, puerperal, death</td>
</tr>
<tr>
<td>XI</td>
<td>Küster</td>
<td>33</td>
<td>VIII</td>
<td>1½</td>
<td>Breech</td>
<td>Yes</td>
<td>Necessary</td>
<td>Died, 30 days</td>
</tr>
<tr>
<td>XII</td>
<td>A. K. Thompson</td>
<td>38</td>
<td>X</td>
<td>1½</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Death</td>
</tr>
<tr>
<td>XIII</td>
<td>R. Simpson</td>
<td>25</td>
<td>XI</td>
<td>Full</td>
<td>Face</td>
<td>-</td>
<td>Necessary</td>
<td>Died, 1 hour</td>
</tr>
<tr>
<td>Number or Case in Reference</td>
<td>Name &amp; Observer</td>
<td>Age of Mother</td>
<td>No of Pregnancy</td>
<td>Date of Onset &amp; of Labor</td>
<td>Present Station</td>
<td>Hydroamnios or Not?</td>
<td>Operative Interventions</td>
<td>Pregnancy Complication</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-------------------</td>
<td>------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>XLIV Galabri</td>
<td>21</td>
<td>Inside 7th Month</td>
<td>Tericy</td>
<td>Necessary</td>
<td>Puerperal Diaphragm</td>
<td>Death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLV Letaloe</td>
<td>26</td>
<td>II Full Breech</td>
<td>Tericy</td>
<td>not necessary</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLVI Luck</td>
<td>24</td>
<td>I Full Tericy</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLVII Blake</td>
<td>-</td>
<td>-</td>
<td>Breech</td>
<td>Necessary</td>
<td>Normal</td>
<td>Death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLVIII Charles</td>
<td>43</td>
<td>XII</td>
<td>7th Breech</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>XLIX Herman</td>
<td>39</td>
<td>VIII</td>
<td>8th Breech</td>
<td>Necessary</td>
<td>-</td>
<td>Death</td>
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<td></td>
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<td>LI Woizensky</td>
<td>40</td>
<td>VIII</td>
<td>Tericy</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LII Preston</td>
<td>35</td>
<td>VII</td>
<td>8th Tericy</td>
<td>Necessary</td>
<td>Death</td>
<td>Rupture of Uterus</td>
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<td></td>
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<tr>
<td>LII Poruk</td>
<td>23</td>
<td>VII</td>
<td>7th</td>
<td>Yes &amp; not Necessary</td>
<td>Death</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LII Truaggi</td>
<td>27</td>
<td>VIII</td>
<td>Full Tericy</td>
<td>Yes &amp; not Necessary</td>
<td>-</td>
<td>DIED SHORTLY</td>
<td></td>
<td></td>
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<tr>
<td>LIV Crawdall</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV Berhtod</td>
<td>26</td>
<td>III</td>
<td>8th Breech</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td>Puerperal Shock</td>
<td>Birth, Mother, and Child Born</td>
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<tr>
<td>LVI Berhtod</td>
<td>24</td>
<td>II</td>
<td>8th</td>
<td>Tericy</td>
<td>-</td>
<td>Recovery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LVIII Peters</td>
<td>-</td>
<td>VI</td>
<td>Breech</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIX Courment</td>
<td>21</td>
<td>-</td>
<td>Tericy</td>
<td>-</td>
<td>Recovery</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LX Jilden</td>
<td>-</td>
<td>VI</td>
<td>8th Breech</td>
<td>Necessary</td>
<td>Death</td>
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<td></td>
<td></td>
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<tr>
<td>LX Kühnssen</td>
<td>30</td>
<td>V</td>
<td>7th</td>
<td>Tericy</td>
<td>Yes &amp; Necessary</td>
<td>Death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LXI Randel</td>
<td>39</td>
<td>IV</td>
<td>Tericy</td>
<td>Yes &amp; not Necessary</td>
<td>Death</td>
<td>Rebirth after 2nd Stage</td>
<td></td>
<td></td>
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<tr>
<td>LXII Ballantyne</td>
<td>20</td>
<td>I</td>
<td>8th</td>
<td>Tericy</td>
<td>-</td>
<td>Death</td>
<td>Suppuration, Seizing</td>
<td></td>
</tr>
<tr>
<td>LXIII Fordyce</td>
<td>27</td>
<td>IV</td>
<td>7th</td>
<td>Tericy</td>
<td>No</td>
<td>not Necessary</td>
<td>Normal</td>
<td></td>
</tr>
</tbody>
</table>

Note: In 5 of these cases (Nos. XII, XIII, XLIV, XLVII, and LII) the Arctic fever was one of twins.
In 4 cases (Nos. XV, XX, XXXVII, and LIX) the mother had previously borne an Arctic father.
IV.

Intra-Uterine Ascites: Its Pathology and Etiology.

I Morbid Anatomy. Aside in the adult is but the symptom or effect of different diseases. That it is the same in the fetus is best proved by the variety of the pathological lesions which have been found associated with it. In order to find under what conditions we are most likely to find an effusion of fluid in the peritoneal cavity during intra-uterine life, I shall first of all before considering the nature of these morbid processes note the various lesions which have been observed in the
of the three cases I have collected.

It is to be regretted that in many of these post-mortem examinations have not been made, or the results of these examinations have been recorded in such a way as to render them of little value to the Pathologist; but still we think there is sufficient evidence to prove that intra-peritoneal Ascites is, in the majority of cases at least, the result of an inflammatory Peritonitis.

As it seems the best method of gathering into a focus the information contained in these cases, I have drawn up a series of tables each one dealing with some particular point of interest.

I. The Fluid

We shall first deal with the amount and the quality of the fluid contained in the different cases. In only thirty of these (including my own) is there a definite statement of the amount of fluid present; most of the others either make no reference to it or content themselves with some general descriptive
phrase e.g. immense quantity", "enormous distension of the abdomen by the quantity of fluid present", "considerable quantity" etc.

Very often of course the amount of fluid was not accurately stated; because, when it was in very large amount, before delivery could be accomplished the abdomen of the child had to be perforated either through the diaphragm or the superior abdominal wall, and as it escaped over the bed clothes the quantity could only be ascertained approximately.

In some cases the circumference of the abdomen is given either with or without further description, as indicating the obstruction to labour caused by the fluid present. This measurement, in the cases where the fluid was evacuated, was only obtained by re-filling the abdomen with water after delivery. It varied from 9½ to 24 inches (24 to 61 centimetres).

The following table gives the amount of fluid in the thirty cases where a definite quantity is recorded. I have indicated in a separate column
whether or not operative interference was necessary during labour. By operative interference I mean puncture or amniorrhaphy.

<table>
<thead>
<tr>
<th>Name of Observer and No. of Case in my list</th>
<th>Amount of Fluid</th>
<th>Was operative interference Necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mauriceau, Case I</td>
<td>5 Pints</td>
<td>Yes</td>
</tr>
<tr>
<td>*Potal, Case III</td>
<td>4-5 Pints</td>
<td>Yes</td>
</tr>
<tr>
<td>Lamontagne, Case V</td>
<td>6 ounces</td>
<td>No</td>
</tr>
<tr>
<td>*Pruneau, Case VI</td>
<td>1 litre</td>
<td>No</td>
</tr>
<tr>
<td>Petit-Heiquin, Case VIII</td>
<td>12-15 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Botval, Case IX</td>
<td>80 Ounces</td>
<td>Yes</td>
</tr>
<tr>
<td>Trench, Case X</td>
<td>3-6 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Trench, Case XI</td>
<td>4-5 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Trench, Case XII</td>
<td>4 ½ litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Trench, Case XIII</td>
<td>3-4 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>*Repaule, Case XV</td>
<td>3/4 litre</td>
<td>Yes</td>
</tr>
<tr>
<td>*Romarvay, Case XVI</td>
<td>6 ozs</td>
<td>No</td>
</tr>
<tr>
<td>*Morteau, Case XVII</td>
<td>8 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Carpeaux, Case XVIII</td>
<td>5 litres</td>
<td>Yes</td>
</tr>
<tr>
<td>*Branley, Hicks, Case XXII</td>
<td>6 pints</td>
<td>Yes</td>
</tr>
<tr>
<td>*Jany, Case XXIII</td>
<td>900 c.c.</td>
<td>No</td>
</tr>
<tr>
<td>Tragare, Case XXVI</td>
<td>About 1 pint</td>
<td>Yes</td>
</tr>
<tr>
<td>Addicrew, Case XXX</td>
<td>250 grammes</td>
<td>No</td>
</tr>
<tr>
<td>*Mathus, Dunham, Case XXXI</td>
<td>100 ounces</td>
<td>Yes</td>
</tr>
<tr>
<td>Robert, Case XXXV</td>
<td>1 litre</td>
<td>Yes</td>
</tr>
<tr>
<td>Kistner, Case XLI</td>
<td>150 grammes</td>
<td>No</td>
</tr>
<tr>
<td>Lethalle, Case XLV</td>
<td>200 grammes</td>
<td>No</td>
</tr>
<tr>
<td>*Rekk, Case XLVI</td>
<td>38 ounces</td>
<td>No</td>
</tr>
<tr>
<td>Hermann, Case XLIX</td>
<td>3 pints</td>
<td>Yes</td>
</tr>
<tr>
<td>Brandt, Case LV</td>
<td>1150 grammes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bertholet, Case LVI</td>
<td>570 grammes</td>
<td>No</td>
</tr>
<tr>
<td>Peltene, Case LVII</td>
<td>2 ½ litres</td>
<td>Yes</td>
</tr>
<tr>
<td>Coreau, Case L VIII</td>
<td>500 grammes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballautyne, Case LXII</td>
<td>20 c.c.</td>
<td>No</td>
</tr>
<tr>
<td>Fordeye, Case LXIII</td>
<td>300 c.c.</td>
<td>No</td>
</tr>
</tbody>
</table>

*In these cases the Bladder was also distended.
Remarks. We see then that the amount of fluid varies very considerably in these different cases—from 20 c.c. up to 6 litres (6000 c.c.)—Petit. Morgagni’s record of “12 to 16 litres” we cannot accept. Even allowing for some exaggeration in the earlier cases, we find that 4 to 5 litres is by no means an unusual quantity. In my own case the distension of the abdomen was very marked and there were present only 300 c.c. yet distinct difficulty was experienced in delivering the trunk of the child. How great the obstacle must have been when several litres of fluid distended the abdomen can be readily imagined. This table shows also that in no case where more than 1 litre of fluid was present was it possible for the trunk to be delivered until the abdomen had been punctured. This fact alone however is not of very much importance. In Jany’s Case (900 c.c.) delivery was accomplished by traction; but in my own though only one-third of that amount of fluid was present, the difficulty in delivery
was so marked as to lead one to suppose that, had the quantity been slightly greater, perforation would have been necessary. The size of the pelvis is of course a factor to be considered as well as the quantity of fluid. In Depaul's case (No XV.) it is to be noted that though only ⅛ of a litre of fluid was free in the peritoneal cavity, the bladder was distended by 2½ litres of urine.

In cases of peritonitis accompanying by distension of the bladder this excess in the amount of the bladder fluid over that in the peritoneal cavity is what is usually found. Portal's case, No III, is quite exceptional in this respect. Free fluid 4-5 pints, fluid in bladder 1½ pints.

Physical and Chemical Qualities.

In the majority of the cases, the quality of the fluid is described merely in general terms, such as "clear serum", "pale yellow", "pale straw coloured", "pale, slightly turbid", "citron coloured", etc. (case XIII), Depaul. Case XV., and Professor Simpson describe it...
as being of a "reddish colour," Vivier. (Case XX.), as "brownish red." The occurrence of flakes or flocculi of fibrin in the fluid is frequently mentioned. In my own case the fluid was pale straw-coloured, slightly turbid, due to suspended flocculi of fibrin.

In only four cases is there any report made of the chemical analysis of the fluid. Jany. (Case XXIII.) states that it was alkaline, containing chlorides. No urea. Coagulum of fibrin.

Lush. (Case XLVI.) states fluid (i.e., free fluid and contents of bladder) was odourless, acid in reaction, no albumen, mucin, or sugar. Microscope showed some crystals of Calcium Carbonate, some squamous epithelium, a few blood corpuscles and a few rod-shaped bacteria.

Truzzi. (Case LIII.) states fluid was straw-coloured, very rich in albumen, alkaline in reaction, S.G. 1.002.

Coquet Case LVIII. The fluid was transparent, yellow alkaline and contained flocculi of fibrin. It
contained Albumen, Urea, Sodium Chloride and Phosphoric acid. There was no sugar and no bile. The fluid of my own case was, by a mistake in the laboratory, lost before analysis was made.

II. Condition of the Peritoneum.

Pathological conditions of the Peritoneum have been noted in 23 cases out of 46 where a post mortem examination has been made. In nearly all those cases which have been fully described mention is made of mortis conditions of the peritoneum; so that we believe they may not unfrequently have escaped notice in those cases where the post-mortem was either hurried or very incomplete. The pathological changes are always manifestations of an inflammation, sometimes acute but generally chronic consisting in a thickened or granular condition of the Peritoneum, adhesions between the various visera, retraction and thickening of the Mesentery, deposit of recent lymph on the Peritoneum et. al.
### Table II: Condition of Peritoneum

<table>
<thead>
<tr>
<th>Name of Observer &amp; No of Case</th>
<th>Condition of Peritoneum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windor Case IX</td>
<td>Small intestines formed a convoluted adherent mass, difficult to separate.</td>
</tr>
<tr>
<td>Trenne Case XIII</td>
<td>Thickened, and covered with reddish granulations invested by a plastic exudation. False membranes vascularized.</td>
</tr>
<tr>
<td>Rokitansky Case XVI</td>
<td>&quot;The dropy was due to extra uterine Peritonitis&quot;</td>
</tr>
<tr>
<td>Keilin Case XIX</td>
<td>Intestines adherent among themselves by inflammatory products. Adherent elsewhere.</td>
</tr>
<tr>
<td>Firense Case XIX</td>
<td>Intestines adherent with fibromyoe.</td>
</tr>
<tr>
<td>Ger vii Case XXII</td>
<td>The cause of the Ascites was a Peritonitis; Intestines adherent.</td>
</tr>
<tr>
<td>Yoss Case XXV</td>
<td>Intestines adherent by membranes.</td>
</tr>
<tr>
<td>Aubenas Case XXX</td>
<td>Inflammatory adhesions. Fluid escaped by spurtation.</td>
</tr>
<tr>
<td>Robert Case XXXIII</td>
<td>Acute Peritonitis. Surface of intestines bright red.</td>
</tr>
<tr>
<td>Sir J. M. Simpson C. XXXVI</td>
<td>Marks of inflammation obvious both on abdominal and intestinal peritoneum.</td>
</tr>
<tr>
<td>King Case XXXVII</td>
<td>Surface of Peritoneum coated with fibrin.</td>
</tr>
<tr>
<td>Oshawaen X XXVIII</td>
<td>Gaseous Peritonitis; caseous adherent to each other by jelly-like membranes.</td>
</tr>
<tr>
<td>Lohle C XXXIX</td>
<td>Signs of Peritonitis.</td>
</tr>
<tr>
<td>A. B. Simpson XLI</td>
<td>Inflammatory Adhesions. Marks of lymph on abdominal viscera.</td>
</tr>
<tr>
<td>Hüsner Case XL</td>
<td>Visceral Peritonitis everywhere of a gum.</td>
</tr>
<tr>
<td>Galabue Case XLIV</td>
<td>Thickened, has lost its smoothness and here and there a film of lymph can be pealed off.</td>
</tr>
<tr>
<td>Letulleee XLI</td>
<td>Recent. Inflammatory Adhesions.</td>
</tr>
<tr>
<td>Porak Case LIII</td>
<td>Acute and General Peritonitis.</td>
</tr>
<tr>
<td>Wolczynsky C III</td>
<td>Peritoneum greatly thickened so that it was found with difficulty.</td>
</tr>
<tr>
<td>Jilger Case LIX</td>
<td>Intestines gathered in a bunch underneath the liver. Peritonitis.</td>
</tr>
<tr>
<td>Bollardyne Case LXII</td>
<td>Slight adhesions.</td>
</tr>
<tr>
<td>Forsbee Case XIII</td>
<td>Greatly thickened, granular. General Chronic Peritonitis.</td>
</tr>
</tbody>
</table>
I have not included in the preceding table some of the earlier recorded cases where the Peritoneum is described in such vague terms as "pale" or "of a whitish appearance". Such descriptions are not infrequent in the earlier cases and very probably, I think, indicate inflammatory changes. Ronaldson's case (1), which is not fully reported, showed signs of Peritonitis in addition to a diseased condition of the bladder.

The importance of inflammatory condition of the Peritoneum in the etiology of intra-abdominal Ascies will be referred to later.

III. Condition of Liver and Spleen.

I have grouped together in Table III, the accounts given of the liver and spleen in 31 cases where mention is made of these organs. Under the head of liver I have included the Portal vein, as interference with the circulation in this vessel plays such an important part in producing Ascies in the abdomen.

Any reference to the Pancreas is so rare that I merely mention here Martin's Case (No XXIV) where there was very marked Ascies associated with enormous Hyper trophy of that organ.

(1) See Part II, page 197 for reference.
Table III.

Condition of Liver & Spleen.

in 31 Cases where mention is made of these Organs.

<table>
<thead>
<tr>
<th>Name &amp; Observer No. &amp; Case</th>
<th>Spleen</th>
<th>Liver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal. Case III</td>
<td>Normal</td>
<td>—</td>
</tr>
<tr>
<td>Windsor. Case IV</td>
<td>Healthy</td>
<td>Soft and Pulpy.</td>
</tr>
<tr>
<td>Ramsey's Case V</td>
<td>Healthy</td>
<td>Healthy.</td>
</tr>
<tr>
<td>Paris. Child Case VIII</td>
<td>Enlarged, Size Dependent.</td>
<td>—</td>
</tr>
<tr>
<td>French. Case X</td>
<td>Healthy</td>
<td>Healthy.</td>
</tr>
<tr>
<td>French. Case XI</td>
<td>Healthy</td>
<td>Healthy.</td>
</tr>
<tr>
<td>Kyri. Case XIV</td>
<td>—</td>
<td>Greatly enlarged &amp; Congested.</td>
</tr>
<tr>
<td>Moreau. Case XIX</td>
<td>Small, Flat faced against Diaphragm</td>
<td></td>
</tr>
<tr>
<td>Vichers. Case XX</td>
<td>Enlarged.</td>
<td>Enlarged.</td>
</tr>
<tr>
<td>Ives. Case XXIX</td>
<td></td>
<td>Small, Edges thickened.</td>
</tr>
<tr>
<td>Stanley. Case XXX</td>
<td>Congested.</td>
<td></td>
</tr>
<tr>
<td>Schroeder. Case XXXIX</td>
<td>Enlarged, 3 ounces in weight</td>
<td></td>
</tr>
<tr>
<td>Au Versus. Case XXXII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. Dumas. Case XXXII</td>
<td>Flat faced against Diaphragm.</td>
<td></td>
</tr>
<tr>
<td>Robert. Case XXXIII</td>
<td>Superior Surface pain</td>
<td></td>
</tr>
<tr>
<td>Porak. Case XLI</td>
<td>Hypertrophy, Chiefly of Left Lobe.</td>
<td></td>
</tr>
<tr>
<td>Galatin. Case XIV</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Norman. Case XLI</td>
<td>Cyst of R. Supra, capsule pressing on Portal.</td>
<td></td>
</tr>
<tr>
<td>Wagonsky. Case II</td>
<td>Very Large.</td>
<td></td>
</tr>
<tr>
<td>Jefden. Case IX</td>
<td>Normal</td>
<td>Flat faced against Diaphragm</td>
</tr>
<tr>
<td>Ballantyne. Case LXII</td>
<td>Enlarged, Firm increase of Connective Tissue.</td>
<td></td>
</tr>
</tbody>
</table>
Remarks. The indefinite character of the statement in the majority of the cases about the liver and spleen are in marked contrast to those on the Peritoneum. As regards the spleen Petit-Méruque case is a notable exception. Here there was some pathological condition very marked in its character. What the nature of the degeneration was we are not told. In Truzzi's case the spleen was also enlarged & congested.

The importance of the liver lesions we will refer to later under the head of etiology. We may merely note in passing that in only four of the cases are the lesions such as would account for any interference with the Portal circulation.

The Pathogenesis, therefore, of Ascites in the Fetus must be different from that in the adult.

IV. Pathological Conditions of the Urinary Organs

Distention of the Bladder is not unfrequently found associated with Ascites in the Fetus. The exact relation between the two conditions it is difficult to determine. We believe that as a rule the
the Aseides is the result of the bladder condition.
In the following table I indicate the chief
points observed in the 16 cases in my list.

**Table IV. 16 Cases.**

Pathological Conditions of the Urinary Organs.

<table>
<thead>
<tr>
<th>Observer &amp; No of Case</th>
<th>Kidneys</th>
<th>Ureters</th>
<th>Bladder</th>
<th>Urethra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windsor, Case IV</td>
<td>—</td>
<td>—</td>
<td>Enlarged. hairselineous thickened. Capacity —</td>
<td>—</td>
</tr>
<tr>
<td>Moreau, Case VI</td>
<td>Large, like one large jet</td>
<td>—</td>
<td>Distended. hairs, thickened.</td>
<td>—</td>
</tr>
<tr>
<td>Depaul, Case XV</td>
<td>Pelvis of Kidney Dilated</td>
<td>Normal</td>
<td>Distended. hairs thickened. Capacity 2¼ Litres</td>
<td>Imperforate</td>
</tr>
<tr>
<td>Wobright, Case XVI</td>
<td>Pelvis of Kidney Dilared</td>
<td>Dilated</td>
<td>Distended to size of child’s head. Narrow but patent.</td>
<td>—</td>
</tr>
<tr>
<td>Moreau, Case XVII</td>
<td>Right enlarged, left normal</td>
<td>—</td>
<td>Distended. Hairs of the hairs, and muscular</td>
<td>Imperforate</td>
</tr>
<tr>
<td>Brayton Hicks, XXI</td>
<td>Pelvis much distended</td>
<td>—</td>
<td>Not distended but contained small quantity of fluid</td>
<td>—</td>
</tr>
<tr>
<td>Portal, Case III</td>
<td>Single</td>
<td>Normal</td>
<td>Distended. hairs thickened. Capacity 1½ Litres</td>
<td>—</td>
</tr>
<tr>
<td>Sany, Case XXIII</td>
<td>—</td>
<td>—</td>
<td>Distended. to Distended</td>
<td>—</td>
</tr>
<tr>
<td>Bruce, Case XXXI</td>
<td>—</td>
<td>—</td>
<td>Distended. Hairs thickened. Capacity 1½ Litres</td>
<td>—</td>
</tr>
<tr>
<td>Matthews Nunan. XXXII</td>
<td>Represented by one large Horn of Liots</td>
<td>Single</td>
<td>Enormously distended. hairs thickened. muscular coat in parts deficient</td>
<td>Imperforate</td>
</tr>
<tr>
<td>King, Case XXXVI</td>
<td>—</td>
<td>—</td>
<td>Enlarged. Distended. Perforation of hair. Capacity 1½ Litres</td>
<td>Imperforate</td>
</tr>
<tr>
<td>Olshausen, Case XCVII</td>
<td>Pelvis Dilated</td>
<td>—</td>
<td>Distended. Hairs communicating with Rectum.</td>
<td>Imperforate</td>
</tr>
<tr>
<td>Lusk Case, XLVI</td>
<td>Fitted</td>
<td>Dilated</td>
<td>Distended</td>
<td>Imperforate</td>
</tr>
<tr>
<td>Melczynwysky, Case L</td>
<td>—</td>
<td>—</td>
<td>Distended</td>
<td>—</td>
</tr>
<tr>
<td>Tildens, Case LXIX</td>
<td>—</td>
<td>—</td>
<td>Distended 16 cm. long &amp; 8 in. thick. Hairs thickened and eateurous</td>
<td>—</td>
</tr>
</tbody>
</table>
V. Malformations of the Genito-Urinary organs are found in 12 cases. These are in 9 cases out of the 12 associated with distension of the Bladder.

Table V - 12 Cases.

<table>
<thead>
<tr>
<th>Observer and No. of Case</th>
<th>Malformations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postel. Case III</td>
<td>Rectum ended in Bladder. No Anus.</td>
</tr>
<tr>
<td></td>
<td>Kidney Single. No auxiliary organs.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td>Windsor Case IV</td>
<td>Large Intestine ended in Bladder. No Anus.</td>
</tr>
<tr>
<td></td>
<td>No Uterus or Internal genitourinary organs.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td>Depaul Case XV</td>
<td>Imperforate Anus. Large Intestine ended in Bladder</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td>Morieux. Case XVII</td>
<td>Large Intestine ended in fibrous cord adherent to</td>
</tr>
<tr>
<td></td>
<td>Bladder Imperforate Anus.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td>Servio. Case XXII</td>
<td>Rectum ended in Cul de sac attached to back wall</td>
</tr>
<tr>
<td></td>
<td>of Bladder. No Anus. Urinary organs normal.</td>
</tr>
<tr>
<td></td>
<td>Cistiosa perforated by urethra. Utero and vagina</td>
</tr>
<tr>
<td></td>
<td>ending uterine canal, vagina for fistula tubes.</td>
</tr>
<tr>
<td></td>
<td>ovaries present.</td>
</tr>
<tr>
<td>Voss Case XXX</td>
<td>Left Ureter and Kidney missing.</td>
</tr>
<tr>
<td></td>
<td>Anus not yet closed at umbilicus. Anus normal.</td>
</tr>
<tr>
<td></td>
<td>Right Ovary absent.</td>
</tr>
<tr>
<td>Bruce Case XXXI</td>
<td>Ovaries Absent.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended)</td>
</tr>
<tr>
<td>Matthews Dunneau XXXII</td>
<td>Kidney represented by a large mass of cysts.</td>
</tr>
<tr>
<td></td>
<td>Single Ureter greatly distended.</td>
</tr>
<tr>
<td></td>
<td>Large Intestine ended in Cul de sac on post</td>
</tr>
<tr>
<td></td>
<td>surface of Bladder.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td>Oldhausen Case XXXVIII</td>
<td>Large Intestine ended in Bladder. Bladder</td>
</tr>
<tr>
<td></td>
<td>communicated with Urethra. No Anus.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended).</td>
</tr>
<tr>
<td></td>
<td>External genitalia malformed. Cistiosa absent.</td>
</tr>
<tr>
<td>Froelzhynsky Case L</td>
<td>Rectum ended blindly. Anus imperforate.</td>
</tr>
<tr>
<td></td>
<td>Pelvic organs undescended. (Bladder distended)</td>
</tr>
<tr>
<td>Jildec Case LIX</td>
<td>Rectum adherent to post mail of</td>
</tr>
<tr>
<td></td>
<td>Bladder ending in cul de sac. No Anus.</td>
</tr>
<tr>
<td></td>
<td>(Bladder distended)</td>
</tr>
<tr>
<td>Fordyce. Case LXIII</td>
<td>Malformed External genitalia. Cistiosa?</td>
</tr>
</tbody>
</table>
Remarks

The occurrence of distension of the Bladder in the foetus is a subject of great interest but only indirectly bears on this paper so we may merely refer to it in passing. The presence of a distended bladder and dilated Ureters associated with an imperfect urethra would seem to indicate that the Kidneys are functionally active during foetal life; and that the distension of the bladder and hypertrophy of its walls are the result of the impediment to the outflow of Urine. The subject does not however in all cases admit of such an easy explanation. Very frequently the Bladder is enormously distended and the Ureters dilated also and the urethra is patent. In Matthews Duncan's case the bladder was very large and full of fluid. The Ureters were obstructed or wanting and the Kidneys completely degenerated. The nature of the fluid in the bladder was not ascertained; but that fluid accumulated in such large quantity, must either have been the result of secretion by the Kidney before the Ureters were
obstructed and obliterated, and before the kidney structure became degenerated into cysts; or it must have been the result of secretion from the lining mucous membrane.

The examiners of the specimen, Professor Sanders and Dr. Pettigrew, thought the latter supposition more probable. The whole question is beset with considerable difficulty. That the Kidneys of the Poets are occasionally functionally active we think cannot be disputed; that this activity is a normal physiological process we consider has yet to be proved.

Malformations of the Genito-urinary organs are frequently found associated with distension of the Bladder. In some cases the malformation may be the result of the arrest of development produced by the pressure of the distended bladder on the surrounding viscera, at an early period of foetal life; in other and probably more frequently the distension of the Bladder is due to some malformation which renders the urethra insensitive or absent altogether. That
The cause may be in the first instance of the arrest of development in this latter class of cases it is difficult to say. We believe there is evidence to prove that it may sometimes at least be found in pelvic inflammation in early foetal life.

The malformations noted in the cases in Table V. become very intelligible if the development of the genito-urinary organs is kept in mind. The chief points in this page of Embryology may be here briefly stated. At the fourth week of foetal life the intestinal caecal consists of a simple closed tube, from the cephalic end of the embryo extending to the caudal extremity. The openings of the mouth and anus occur from without inwards by inversion of the integument which are prolonged backwards to the cephalic and pelvic portions of the caecal respectively. Sometimes the anal inversion is not complete so that a blind sac exists. Very soon after the intestinal tube is formed and before the anal invagination
opens into it, the Allantois passes out from its lower extremity to take part in the formation of the Chorion. That part of the Allantois which enters into the formation of the Umbilical cord is gradually obliterated; the lower half of the remainder, which still communicates with the rectum, dilates to form the Bladder. The upper half, between the fundus of the Bladder and the Umbilicus, remains as the co-alescence structure we now call the whole Urachus. About the same time that these changes are taking place the ducts of the Trolffeni bodies are developed and open into the Bladder or Urachus. These ducts are the primitive Ureters, the Trolffeni bodies being the primitive kidneys.

At about the 10th week of Fetal life the depression of the Anus or as it is generally called the Genital Cleft opens into the conjoined Urachus and Rectum and the Cloaca is thus formed. The cloaca subsequently is divided into the two genital sinuses and the Rectum proper. Into this cloaca we have the Mullerian ducts opening. These ducts form the
Vagina below and Uterus above. In early foetal life therefore are the excretory ducts open into the Bladder; if development is arrested at an early stage we will find, as in Olschausen's case, the Bladder in communication both with the Rectum and the Uterus; more frequently only the opening into the Rectum persists.

In very few cases have we any reference to the condition of the Heart or the Placenta and such references, unless it is distinctly stated that the Heart and Placenta are normal, are always vague and indefinite. Interference with the circulation in these organs would in all probability produce a General Dropsy, a disease whose pathogenesis and etiology it is much more difficult to explain than the Local Dropsy of the Peritoneum which we are specially concerned with.

II. Etiology. The conditions in the adult which cause Ascites or Dropsy of the Peritoneum may be grouped
under two heads: 1st Those which cause 
an obstruction to the Portal circulation; 
and 2nd Affections of the Peritoneum itself. Obstruction to the Portal circulation 
is the most common cause and may be 
due to Simple Atrophy, Cancer, Cirrhosis 
and syphilitic disease of the liver; or to 
a chronic inflammation of the capsule 
of the liver — Perihepatitis. These diseases 
act in producing Ascites by compressing 
the branches of the Portal vein 
within the liver. The Trunk of the 
Portal vein may be obstructed by 
cancerous growths involving the gastro-
-hepatic omentum or by Thrombosis. 
Affections of the Peritoneum are in 
the adult a rarer cause of Ascites; 
they consist in some form of inflammation—Acute, Chronic, Tubercular, or 
Malignant.

It remains for us now to consider 
the Etiology of the disease in intra-
uterine life and to estimate the 
significance of the various lesions that 
have been found associated with it.
In the opinion of some authors obstruction to the circulation of the blood in the liver plays no part in the production of Foetal Ascites and they would account for the Ascites which is found associated with lesions of that organ by some secondary inflammatory condition of the Peritoneum. During the earlier months of foetal life the Portal circulation is more or less rudimentary; but towards the end of gestation the blood supply of the intestines has considerably increased. The presence of the meconium and its descent into the lower portion of the large intestine indicate both activity of the intestinal glands and peristaltic action. These two functions must necessitate a larger blood supply; any obstruction to the return of which, we can easily conceive might lead to serous effusion into the peritoneal cavity. We consider therefore that the Ascites in Hering's case — presumably free — as no mention is made to the contrary — was due as he supposed
to obstruction of the circulation in the trunk of the Portal vein by the tumour of the right supra-renal capsule which pressed on it. The cases of Besredka, Hétaile, Küstner, and Schröder are to be explained in a similar way; in them, however, the obstruction to the Portal circulation was due to cirrhotic changes in the connective tissue of the liver. The syphilitic gummatas in Andrunas' case might act in the same way in producing the Ascites. In all these the features were free or nearly free time. There remain however a large number of cases in which either no lesion of the liver is recorded or the lesion is not such as could have obstructed the circulation in the Portal system even had it been established. We think that the most of these, and by far the majority of all cases of intra-uterine Ascites are due to inflammatory conditions of the Peritoneum. As we have stated before, in nearly all the carefully examined cases Peritonitis has bee
recorded. With the exception of two cases this inflammation has always been of a chronic character as indicated by the firm vascularized adhesions between the different organs or by the greatly increased thickness of the peritoneum. We can easily understand how such changes, if general, lead to an accumulation of fluid in the peritoneal cavity. Not only will there be an increased outflow from the capillaries as a result of the inflammation; but the lymph channels, by which it is normally removed, will be obstructed or altogether blocked.

Sir J. Y. Simpson in his classical article on "Intrauterine Peritonitis" records several cases of this disease, in only two of which however was there any very marked Ascites. He is of opinion with regard to ascites of these cases — excepting two — that the affection had been of such an acute nature that the patient had died as a result of it. It is only Peritonitis of long standing which will...
produce as we have already explained such effusion as can be designated 'Ascites'.

So far as we know, no cases of malignant or Tubercular Peritonitis in the Foetus have been recorded. Our own case presented many of the appearances of the latter, but we searched most carefully but in vain for confirmatory evidence of this in the presence of the Tubercle Bacillus in the fluid and Peritoneum. Nöggert had recorded a case of Cancer of the liver in the new-born child. It is possible therefore that the enormous tumour of the Spleen in Petit-Menguin’s case, which was associated with marked Ascites, may also have been malignant and the Peritoneum may have become secondarily involved.

We have now considered the two local conditions which in the adult cause Ascites, and have estimated their significance in the Foetus; and our result has been that their relative importance is exactly reversed in the two — the Portal circulation which is the more important
in the adult being the less so in the Fœtus, and the Peritonitis which is the less important in the former being the chief cause in the latter.

Our conclusion is that, while in some cases, especially in the last month of foetal life, Ascites may be produced by interference with the Portal Circulation, the greater number must be the result of Peritonitis; for as we have seen, the majority of the cases that have been recorded are in premature foetuses where the Portal circulation as a possible cause is eliminated since at that stage of intra uterine life it is very rudimentary.

There remains another class of cases of Ascites in the Fœtus which would seem to fall under neither of these heads, viz. the Ascites which is found so frequently associated with a distended condition of the Bladder; but we believe that all of these would come under the second head—Peritonitis. It will be noted from a comparison of Tables II and IV (pages 74 and 78) that Inflammatory
conditions of the Peritoneum have in such cases nearly always been observed; and we attribute the Ascites in them to the Peritonitis which was present, and might result from the irritation produced by the distended Bladder or, as was noted in Küni's Case (No. XXXVII.) to a perforation of the Bladder wall and escape of some of the contents into the Peritoneal Cavity.

Obstetrical Case is exceedingly interesting in this connection. In it there was Ascites associated with marked Peritonitis which was due to a most unique cause. The Bladder was greatly distended and communicated with the Uterus, and the Fallopian Tubes were as a result also distended; and the Peritonitis was due to the escape of some of the fluid into the Peritoneal Cavity.

**Pre disposing Causes in the Mother.**

There is only one definite statement which we can make in this connection, viz., that Syphilis of the Foetus, communicated to it by the Mother, may manifest itself in such lesions as have
been noticed to cause Ascites, e.g., gummata of the liver and inflammation of the Peritoneum. In 9 out of the 63 cases which I have collected there was reason to believe that Syphilis was present in either or both parents.

What the pre-disposing causes in the Fetus itself are which lead to the production of Ascites we do not know.
Part II.

Abstract of the Reports of Sixty-two Cases of Intra-Uterine Ascites, arranged Chronologically. The literature in addition to these Cases.
Maurietzau (Traité des maladies des femmes grosses. Paris 1681, p. 205.
Thière van Gelden. 1849.)

The author records a case where he was called in to assist at a labour by two midwives who had failed to deliver the child further than the head. In their efforts at extraction they had dislocated the cervical vertebrae of the foetus and had almost torn off its head. Maurietzau, in order to discover the cause of the obstruction introduced his hand into the uterus and passing the shoulders, which did not seem in any way enlarged, he found the abdomen of the child enormously distended by fluid so that it was impossible for it to be delivered until the fluid had been evacuated.

Not having a suitable instrument with which to puncture the abdomen, he sent for a surgeon from the Hôtel-Dieu.

The surgeon, however, on his arrival did not agree with the diagnosis and making further traction pulled the head from the body. He next used
a crotchet and pulled away pieces of ribs and the thoracic viscera. After working ineffectually for three quarters of an hour he was compelled to divert his rest. Finally Mauriceau was given the crotchet with which he pierced the walls of the distended abdomen of the fetus. Immediately a great torrent of water escaped and he was able thereafter to draw out the rest of the body with one draught, without any difficulty.

He subsequently filled the abdomen with water to see how much fluid it could contain and found that it filled without difficulty more than five pints. The mother made a good recovery. He records the case, he says, in order that the surgeon may know how to treat similar cases.

The case was evidently one of ascites. It is chiefly of interest as illustrating the dystoeia which may be caused by congenital ascites.
The author relates a case where he was sent for to assist a midwife who was attending a woman and who, after delivering the head, was unable to deliver the rest of the body. When de la Motte arrives he found, that in making further efforts at extraction, the midwife had torn the head of the child completely off. Suspecting that a narrow brim, with an unusual size of the shoulders, was the cause of the difficulty, de la Motte introduced his hand into the uterus to turn, after carefully pushing back the shoulders. In performing this operation he noticed that the abdomen of the child was unusually large and smooth. After the legs were brought down he had great difficulty in getting the abdomen to pass thru the brim but he ultimately succeeded by rocking the body from side to side. The abdomen appeared to contain much fluid. He opened it and allowed the fluid to drain away. It was clear and without odor. The mother recovered. (Autopsy very incomplete)
Case III.

Portal (La pratique des accouchements) 1783.

The author records a case of long uterine ascites and retention of urine. He was called in to assist at a labor where the head of the child had been born and the midwife had failed to extract the rest of the body. The child was dead and in making traction the head and one arm were born off. It was then easy to recognize that the obstacle to delivery lay in the greatly distended fluctuating abdomen of the child. The abdominal wall was pierced by means of a sharp hook and in this way 1 or 2 pints of fluid were evacuated. The body of the child was then born with difficulty. The pregnancy was evidently only of 7 months duration.

The bladder of the child was distended and contained 1-5 pints of urine. There was no anus, no sex ureters, or testicles. The Bladder wall was hard, the thickness 1-2 lines. Acid and calcareous. The Uterus were normal. Kidneys, spleen and degenerated. Liver normal.

Rectum ended in the bladder. No trace of spermatic vessels.
Case IV.

The Author records the following case of ascites occurring in a lactus, which formed an abdominal tumour so large, as to prevent delivery without instrumental aid. He was called to see Mrs. H., aged 24, and in her first pregnancy, on account of some difficulty in her labour.

An experienced midwife, who was in attendance on the case, gave him the following history. Pains had commenced the preceding evening and that the membranes had broken early in the morning before she was called in. She found the face presenting and the umbilical cord prolapsed. The head however, after strong pains, was expelled but after this time the uterine action ceased, and every attempt of the midwife to accomplish delivery proved unavailing. The patient had good health during her pregnancy but complained during the later months.
Case IV

Windsor. (Continues).

of a feeling of great heaviness in the lower abdomen. This was accompanied by oedema of the lower limbs.

Windsor on his arrival diagnosed some transmigration or morbid alteration of the foetus as the cause of the difficulty; and on applying my hands to the patient's belly I found the abdominal humour very large, the child's head was born and the waters had been long off.

Having placed the patient on her left side in bed I proceeded to draw gently, though perseveringly by the head; but the attachment of the cervical vertebrae, previously weakened by the midwife's attempts, now entirely gave way.

I then barred a crutchet within the ribs to assist extraction; but this also failing I carefully pushed in the perforator, in order that I might be the better enabled to descend below the foetus.

As soon as the instrument penetrated the diaphragm there issued an immense
Case IV.

Trudeau. (Continues).

A gush of fluid, overflowing the bed and passing through into the room below. After this, the uterine action, which had been so long dormant, was immediately renewed, and the foetus, a female child, with the placenta were expelled. The abdominal parites of the child now presented themselves, from their previous distension, as a very large, somewhat pendulous and almost empty bag."

P.M. Examination of Foetus.

The bladder was enlarged, bristles in parts calcareous, muscular coat atrophied in parts. "At the sides of the openings of the ureters into the bladder, there was seen of two cul-de-sac, each of which would admit the end of the little finger as far as the first joint. The small intestines formed a convoluted adherent mass, so that the different portions were with some difficulty separable. The large intestine ended in the bladder. No anus.
Case IV

Windso.. (Continued)

"no uterus or internal organs of generation were found; and indeed the pelvis or 
rectum" (with which the large intestine communicated) "was close to the posterior part of the 
bladder". The external organs of generation seemed natural. There, soft and bulky, 
spleen much firmer, the pancreas also was of firm consistence. 
Thoracic viscera normal. The fetus was full grown; and did not seem to have been dead long, as the cuticle remained entire. The mother made a good recovery. She 
subsequently bore two healthy
well formed children."
Case V

Lumouroy. (Mouvre, Bibliothèque médicale 1825, vol. VII, p. 441.)

Hydramnios. Ascites of foetus.

Madame B. age 38; strong constitution; had always enjoyed good health. Two previous pregnancies are normal, children alive and healthy. At the 4th month in this birth pregnancy she noticed that her abdomen was distended to the size of an 8½ month pregnancy. She suffered also from oedema of the lower limbs. When seen by Lumouroy at the 5½ month, her abdomen was very distended. She suffered from dyspnoea and indigestion and was very emaciated. Ballotttement alone made the diagnosis of pregnancy certain. Treatment attempted; rest in bed and diuretics. Labor pains came on at the eighth month. First stage was normal. When membranes broke there was a great rush of liquor amnii; six litres were collected and measured, one litre the calculated was lost—seven litres in all. With strong pains the head was born in a quarter
Case V

harmony. (Continued).

Of an hour after the rupture of the membranes. The chest and arms were born soon after and then there was a strange delay, and the rest of the body moved not follow in spite of traction and strong pains. Two fingers were introduced into the vagina to see what was causing the difficulty, and the then recognized that the abdomen of the child was very much distended. By raising the arms and body of the child towards the pubis and making traction he was able at last to effect the delivery of the child, without having resort to puncture of the abdomen.

The child, a female, was born alive of a dark violet colour. Respiration was not satisfactory for two hours however; and after living for six hours it died suddenly.

P.M. Deep injected, brain emollient than normal and of a yellowish tint. No effusion in the ventricles, lungs crepitation all over. All the abdominal organs appeared healthy. The Peritoneum,
of normal colour and consistence.

The Peritoneal cavity contained six ounces of a yellowish fluid, slightly opaque and becoming more so on the addition of acetic acid. The stomach and about one foot six inches of small intestine were empty. The rest of the small intestine, 8 ft 7 inches, was filled with meconium. The large intestine was entirely empty.

The mother made a good recovery. (Circumference of child's abdomen after birth was 13½ inches).
Case VI


(Van Geldecr. op cit.)

A woman pregnant for the fourth time was delivered three weeks before term. The child, a female, lived only three hours. Its abdomen was large and distended by a fluid. On making a post-mortem examination Moreau found a litre of yellowish serous fluid in the peritoneal cavity. The intestine were very small in calibre, containing no meconium. The bladder was distended up to the umbilicus; its walls were thickened. Its mucous membrane was congested. Both ureters were distended. The kidneys were very large resembling "a large cyst."
Case VII

Herpin. (Gazette des Hôpitaux 1832, Vol. V)

The author relates how he was called in consultation to a case where two doctors who were in attendance had failed to effect delivery. The child had presented by the head, but when the head has been born the rest of the body moves not follow in spite of strong traction. Two doctors who were soon moved by the nurse in attendance thought that the shoulders of the child were the cause of the difficulty, and after placing them in the oblique diameter of the pelvis pressed on the head, which was born, so vigorously that they tore the head from the body. Herpin on his arrival found the woman much exhausted. Her pelvis was fairly normal, slightly narrow at the outlet, Stenosing emptied the patient's bladder which contained an enormous quantity of urine. Herpin passed his hand carefully into the uterus to find out the cause of the difficulty in extraction. The abdomen of the child, he finally made out, was
Case VII

Her pain (Continued).

... enormously distended by a fluid which he could easily detect the fluctuation.

He perforated the abdomen with a sharp knife, pushing the point of the instrument to the umbilicus, by means of the left hand introduced into the vagina. A great quantity of serous fluid drained away after the perforation; and the child was then easily delivered.

The woman made a good recovery. (This was her second pregnancy).

The fetus was very thin except that its abdomen was enormously distended. It did not appear to be more than a 4 months child; it had been dead for a few days. It showed well marked face signs.

(No mention of any post-mortem.)
Case VII


The Anethor was called in to assist at a case where the woman had been in labor for twelve hours. The head of the child was at the outlet. By forceps it was delivered; but in spite of strong traction he was unable to deliver the rest of the body. After several attempts, without success, to effect delivery, he decapitates the child, which had been dead for some time, in order to facilitate the introduction of his hands into the uterus, to diagnose what was obstructing the delivery of the rest of the body. Where the hand was in the uterus nothing but a large soft fluctuating ball could be felt completely filling the uterus. The thoracic organs having been taken out the deep region was punctured by scissors, 12-15 litres of fluid then escapes. Thus the opening thus made, and the labour was then speedily finished. The spleen was degenerated, very large and weighs one and a half pounds. The mother made a good recovery.
Case IX

Gottel. (Graefe's und v. Wachows Journal 1826, 1837) a Van Gelder. op. cit.

Case of enormous ascites in a 7 months fetus.

A B. 39 years. First three pregnancies had all ended normally. In her fourth pregnancy labor came on at the 7th month. When seen by Gottel she had been in labor for 48 hours and the water had escaped for 36 hours. Patient was cachectic of a sickly appearance and prostrate by the length of the labor. There was edema of the lower limbs. The abdomen was large but uniformly distended. The fundus was not palpated. The child's head was very small and had entered the pelvis. Nothing was found on the post surface of the child to account for the delay but on passing the child anteriorly the abdomen was found to be enormously distended, tense as a drum and firmly wedged in the pelvis; this was punched by a sharp hook & over 80 ounces of fluid escaped. The child was a female, immature, it had a peculiar fleshy look. The abdominal organs were flabby and shrunk. The contained fluid was of a yellowish tint.

Post mortem. Incomplete.
Case X

Trenck. (Thése, Paris 1837.)

Van Gelder op. cit.

Madame P. Aetat. 33. 21 p.s. Her first 5 pregnancies has all ended normally.

In her sixt labour the head of the child was born, but the midwife in attendance could not deliver the rest of the body. A doctor was called in to assist, and he, after making strong traction without success, in order to turn more easily, decapitated the child. He was however, even after this process, unable to reach the feet to send for Trenck. Trenck arrived after the woman had been in labor for 15 hrs during which time the pains had been strong. He pushed back the parts of the foetus which had been dragged into the vagina and with difficulty grasped the legs and turned. In turning he noticed that the abdomen of the foetus was very much distended and he diagnosed foetal ascites. Having brought down the leg, he punctured the abdominal mass to allow the fluid to escape. He punctures with an ordinary bistoury
Case X.

Trench. (Continued).

As a result of the puncture five or six litres of fluid escaped and the labour was soon finished. The fetus presents a very large abdominal cavity which still contains some fluid. The abdominal organs show no nothing abnormal except that they were a little pale. The child was otherwise well formed.

The mother died of peritonitis five days after delivery.

Case XI.

Case II. (Trench op. cit.)

M.M. Age 36. pregnant for the 4th time. Nothing unusual was noticed for the first seven months of her pregnancy. During the 8th month the abdomen increased greatly in size especially on the right side. The pain was however able to follow her occupation up to the time of her confinement which came on at full term. The left arm of the child presented, and the nurse,
recognising that she has to do with a difficult labour sent for a doctor. The doctor tried to turn but only succeeded in disarticulating the arm, and in the end sent for Trench. The latter, in passing his hand along the anterior surface of the foetus in the operation of turning, noticed a swelling in the region of the abdomen, which was fluctuating. He diagnosed ascites and as in first case he punctured the abdominal wall with a bistoury after the legs had been brought outside the vulva. From the opening in the abdominal wall, four or five litres of a yellowish serous fluid escaped. The child was then born with the greatest ease.

The child was a female; well developed. Its abdomen was very large; the muscles of the abdominal wall thin. The Peritoneum was pale, the abdominal organs were healthy and were not enlarged. The mother had an inflammatory attack after the labour but recovered.
Case XII

Trunel. (op. cit.)

Case III.

La femme D., pregnant for the second time, and of a healthy constitution. About the 3rd month she had a fright and never felt well afterwards up to the time of her confinement. Foetal movements all but had. The pregnancy had been very feble and ceased altogether during the last four days. As in the other cases the foetus was born naturally and then there was a strange delay. Trunel was sent for and found the head born, the child evidently dead. He introduced left hand into the womb and diagnosed congenital ascites with great distension of the foetal abdomen. He made a puncture with a pair of scissors and a large quantity of yellowish serum escaped. The foetus was therefore speedily born. The child was a female, poorly developed; it had a hare lip and chest palate. The abdominal cavity was able to contain half litres of fluid. The Peritoneum was pale showing no traces of inflammation and no lesion of heart. In other recovered.
Case XIII.

Trench. (op. cit.) 1837.

Case IV

The author relates how he was called one morning to see a woman at 24 who had died suddenly. In examining the woman he felt movements in her abdomen, which he recognised as being those of a foetus in utero. He performed Caesarean section at once and extracted a six months living child. The child was small and poorly developed. Its abdomen was very distended and fluctuating. The child was alive when extracted but soon died. It was examined after death. The peritoneal cavity contained three or four litres of a reddish colored fluid. The surface of the peritoneum was covered with reddish granulations and was thickened. The intestines were compressed and very small.

Post mortem on the mother showed cause of death to have been arsenic poison poisoning, probably suicidal.
Case XIV

Hyel. 3. 73. (Nuee Zeitschrift fur Geburtshinde)
Vol. 4. 1839. P. 74.

The patient, M. aged 29, became affected with syphilis whilst she nursed her second child. She was under antisyphilitic treatment for 8 months. During this time she aborted at the 3rd month, and a few months later she became pregnant for the third time. At the end of the eighth month she had a slight discharge of fluids from the vagina — liquer amnii — and a few days later labor set in. The child presented by the breech, and the cord prolapsed. It was born alive — a female — but died in a few minutes. Her abdomen was much more dis tended than normal. The placenta was enlarged and hypertrophied.

Post Mortem Examine of the Fetus.

Her abdomen was distended and contained a considerable quantity of slightly yellow fluid. The large intestine also contained much fluid. The liver was greatly enlarged. It showed no traces of inflammation. Distended blood vessels were seen under the peritoneum. On section vessels seemed enlarged.
Case XV

Dépance. (Bulletin de la Société Anatomique) 1848.

A B had been attended in her third confinement by a midwife and a doctor. The head of the child had been born, the rest of the body could not be delivered. So strong traction was made, that when Dépance was called to see the case, he found that the head and both arms had been torn off and that the trunk still remained in utero. Pounding his hands into the uterus he could not reach the feet of the child. The uterus being occupied by a rounded, smooth, fluctuating mass. In Dépance diagnosed a compressible ascites and pierced the abdomen with his finger and as if a litre of a reddish fluid escaped. Since it was not possible to deliver the trunk of the child. Pounding his finger once more thus, the opening in the abdominal wall of the foetus, it was discovered that in the cavity of the abdomen was a large cyst
Case XV

Desease (continued)

This time our was also punctured with the finger and 2 1/2 litres of yellowish transparent fluid were evacuated. After this, the labour was soon ended.

The child was a 6 1/2 months foetus. The woman believed herself to have been at her full time. There was a small amount of liquor amnii.

PM. Examination of foetus.

Abdominal cavity quite normal.

The bladder was greatly distended, there were adhesions between bladder and abdominal wall. The bladder wall was much thickened.

There was an absence of the urethra about its middle.

Ureters and kidneys normal.

The anus was imperforate.

The large intestine ended in the bladder.

The mother made a good recovery.
Case XVI

Robitansky. Pathological Anatomy.
Sydenham Society. Vol. 11, page 351, 1849

The Author records a case taken from a preparation in the Viennae museum of intra uterine peritonitis. "A new born male child with a large abdomen is provided with a bladder the size of a child's head. Collapsed and agglutinated to the abdominal pariety by a thick effudation. These false membranes are vascularised. The urether is narrow but patent. The ureters are dilated inferiorly. The pelvis and calices of the kidneys are slightly dilated. The ureters are coiled and bound down by a tense cellular sheath. The Abdominal viscera are all pushed upwards. The urether is very narrow. The Abdominal integuments are pedunculated below the insertion of the umbilical cord. The Peritoneum was invested by a plastic exudation and contained six ounces of a yellow opaque fluid."
Case XVII

Moreau. (Bulletin de l'Academie de Medicine Vol.17. 1852 p.904)

"The Author records a case of Congenital Ascites and Retention of Urine.

He was cared for by a midwife to assist in the delivery of a Primipara. Labor has set in at the 4th month. One child has been born by the aid of forceps, and a second had been turned and the feet brought down but the trunk came not be extracted owing to the large size of the abdomen of the foetus. Moreau diagnosed a Congenital Ascites and, having failed to deliver by strong traction, punctured the abdomen with Smellie's scissors. Two litres of yellowish transparent fluid escaped but still efforts at extraction were unsuccessful. A second tumor, or mass was felt to be present in the abdomen of the foetus, this was next punctured and about a litre of clear transparent fluid escaped. The first puncture had opened into the peritoneal cavity."
Case XVII

Morange (Continued)

The second had punctures a distended bladder.

PM on Foetus. The Thoracic cavity was singularly small. The heart was compressed. The liver small was flattened against the diaphragm. The small intestine the stomach and the spleen form a mass at the upper part of the abdomen. The uterine are smaller than normal. The anterior and inferior part of the abdominal cavity is filled by a large tumour - the bladder wall. 10 cm. thick, come at some parts where they are thinner and almost transparent on the right lateral part there is an adventitious pouch, a sort of cyst. This seems to be formed by a hernia of the mucous coat of the bladder thru the muscular coat. The Colon, adherent to the bladder, ends in a fibrous thread. The Urethra is imperforate. The Urethra is impermeable in its inner two thirds. Right Kidney & R. Ureter enlarged. Left normal.
Case XVIII.

Carpenter. De l'acide du poireau comme cause de  
de dysenterie.

(Revue médicale chirurgicale de Malagasy Paris 1863).

The author records the case of a woman, who, 
42 years of age, had arrived at the 6th month 
of her 12th pregnancy when labor pains came 
on. When Carpenter saw her she had been 
in labour for several hours, the head 
presented and the cord was protruded 
outside the vulva. Examination showed 
also that the conjuncts of the brim was 
shortened by one inch. In consequence 
probably of this narrowing all her previous 
labours had been laborious and of the 
11 children she had given birth to one 
only was alive — the first — all the others 
had died during labour. The pains were 
strong however, and the head was soon 
born so that C assures patient that 
this time her labour might be speedily 
finished. In spite of strong traction 
on the head and with fingers in the 
sinus he found it impossible to remove 
to deliver the rest of the body. Suspecting
Case XVIII

Carpenter (Continued)

Some deformity of the fetus he introduced his hand carefully into the uterus and in passing it over the front of the uterus was at once struck with the enormous volume of its abdomen, which he recognized as being distended with fluid. Evacuation of the fluid he saw was necessary to accomplish delivery. He tried at first to puncture the abdomen with the trocar at the end of the forceps but found this quite impossible owing to the narrow brim and the high position of the child's abdomen above the symphysis pubis. Finally, pushing his fingers into an intercostal space, he introduces thus the opening thus made a sharp steel rod and pierces the diaphragm, directing the instrument carefully with his fingers. In this way 5 litres of fluid escapes from the abdominal cavity of the child which was then easily born. The child had been dead for some days. The mother made a good recovery.
Keiller. (Edin. med. Journal 1836. p. 186.)

Dr. Keiller showed to the Obstetric Society a foetus with a very large dropped abdomen. The mother at the 4th. Month of her pregnancy complained of pain increased on pressure, over the lower part of the abdomen. There was much swelling of the feet, legs and labia. Foetal movements had stopped and no foetal heart was heard for some time before labor. Labor came on about the 8th. Month. The head came down easily; cord prolapsed. The Amo were brought down and strong traction made but no advance took place. Distension of the foetal abdomen was diagnosed as cause of delay. The child was ultimately born with difficulty. The mother died well.

"Subsequent examination showed that dropsy of the urine was due to intra-uterine peritonitis."
Case XX

Virchow. (Monat. f. Geburtsh. 1858, VII, 1, p. 161.)

The author records a case of "Hydrops Foetalis" in a newborn child. Another Act 30 VII para the eldest of family was healthy. Her last three children had died soon after birth and had all presented dropsical distended abdomen. In her seventh pregnancy she was very well except that the complaint of a feeling of heaiveness on the right side. There was a great quantity of liquor amnii. The child was born easily. The placenta was of an enormous size. The child was, according to its development, about the seventh month. Its abdomen was distended and there escaped from the peritoneal cavity, when the abdomen was opened, a brownish red fluid, it flowed off in somewhat abundant quantity. The bowels appeared in many cases covered with fibrinous flakes. The mesentery was thickened, lacrinated and retracer. The liver and spleen were enlarged. The Supra Renalis showed fatty degeneration in the medullary substance. The ileal...
Viehöur (Continued).

The tube was very short; No fluid in the thorax. The lungs, not distended, on account of the compression by the high position of the diaphragm...

A.B. cert. 36. uti-para. First child was born 14 years ago. During this, her present pregnancy, she has suffered for some time from feverish symptoms, scanty urine, oedema of legs, thirst, etc. Labor came on at the 7th month. There was an excessive quantity of liquor amnii - 8\text{lb}. 12\text{oz}. The child was born as far as three but remained refused to come away. The uterus was so firmly moulded round the child's body that the hand could not be introduced into the uterus to see what was the cause of the delay. until chloroform has been given. It was then recognised that the distended abdomen of the child was the cause of the delay and difficulty. The abdomen was then punctured with a crochet and two quarts of fluids instantly escaped with great force. Delivery took place soon after.

The Placenta was detached, very large, ragged, and pulpy.

PM on Doctor. A quart of fluids still
Case XXI.

Braxton Hicks (Continued).

remained in the peritoneal cavity.
Both ureters were adherent near the bladder for one third of their length. Above, they were distended, as were also the pelvis of the kidneys. There was some fluid in the bladder showing that the ureters had once been pervious. There were some flakes of 
ymph in the abdominal fluid but no 
peritonitis. The Placenta was pulpy;
the villi retained cohesion and, when 
placed in water, the various branches 
flaoted from one another.

(He also records a second case with 
great distension of the bladder, which 
requires perforation to effect delivery.
The bladder contained 2 quarts of 
urine. There was atresia or obstruction of the urethra.)
Case XXII

Dr. G. exhibits the body of a female child
not has been sent to ruin. The history
was that the head had been born; but
great difficulty had been experienced in
delivering the body, owing to the greatly
distended abdomen. Delivery, finally
accomplished by traction.

Report by: Braxton Hicks, Gervis, Blesder.
Uterus kidneys and ureters normal.
Labia majora small. Vulva and vagina
narrow. Eclampsia prominent. The urethra
opened at its extremity. The uterus, greatly
distended and very tense, was globular in form
and contained about 1/2 of a pint of fatty, serous
fluid. The cornua were much developed
in length. They somewhat exceeded an inch and
per mimero the little finger to be passed into
them from the exterior of the uterus. They
were closed at their free ends. No traces of
fimbriae or tubae. The ovaries were flat,
almost shapes, thin long and attached to
Case XXII

Servis. H. (Continued).

The sides of the uterus at the base of each horn
the uterus was divided internally by a
vesical septum into two cavities. There was
no trace of either os or cervix, the double
terine cavity being thus completely closed.
The walls of the uterus were thin and their
inner surface was smooth and polished
like a serous membrane. There was no
vagina. The lower half of the Rectum
was absent; and the upper part ended
in a cul-de-sac, which was attached to
the back of the uterus about its centre.
The usual place of Rectum and Vagina
was occupied by cellular tissue. There
was no anal aperture.

There was a small quantity of bloody
ascitic fluid in the peritoneal cavity.
The coils of small intestine were
extensively adherent amongst themselves
apparently by inflammatory products;
and adhesions also existed in other
parts of the Peritoneal Cavity.
Case XXIII

Jany. "De Atrophaea Min. Beiträgen zur Gynäk. 17, Heft 5, S. 240, 1864"
(Herzog, op. cit., p. 16)

"The Author records a case of Congenital ascites with distension of the bladder.
A B. 28. III. para. "Healthy Labor set in at the 7th month. The child presented by the breech and there was considerable difficulty in its delivery. It died soon after it was born.

Post Mortem Examination. Length, 42 cent.; abdomen, greatly distended partly by free fluid and partly by a tumor, which could be felt thru the abdomen and reaching as far as the diaphragm. Umbilical cord and ovaries, lower extremities and retroplacental and retrovesical. Utero was permeable for 1 centimetre at its outer end. Head and thorax normal. In the abdominal cavity there is much free fibrinous exudation. Liver, small, edges thickened. Spleen, thick and covered with fibrinous deposit. Bladder and ureters distended. Amount of free fluid 900 cm. Color bright yellow.

Reaction: Alkaline; Congulum, Chlorides, no Urea."
Case XXIV


Note.
The Author relates the case of a fetus that had an enormous Ascites, in which puncture was necessary in order to effect its delivery. The Child died after birth and there was found on post-mortem examination an enormous hypertrophy of the pancreas which Förster considered the result of an inflammatory process.
Case XXV

Toss. (Gynecological Society of Berlin
Nov. 14, 1865.


The author records a case where he was obliged to perform embryotomy for a deformity of the foetus. The patient was a primipara, aged 22, and healthy.

When first seen by Toss she had been already a long time in labour. Her abdomen was unusually distended so that a twin pregnancy was suspected. The head of foetus was presenting with face towards pubis. The os was fully dilated so forepers were applied over the head delivered. The arms were then brought down and then it was found impossible to deliver the rest of the body. Some malformation of the foetus was suspected and embryotomy was decided on. The thorax of child was excircaterated and the diaphragm having been perunured a quantity of fluid escaped and the child was then easily born. Mother made a good recovery.
Case XXV

Voss. (Continued).

PM. on Foetus. (See Monatschrift für Gebursthunde und Frauenkrankheiten Vol. 17 pp. 243 by Rose)

Resume. The child is small and immature, 12 inches in length. It has evidently died during delivery. The walls of the abdomen, although retracted, bear witness alike to the stretch and to which they have been subjected. The circumference of the abdomen at the umbilicus measures 9 inches. The reason of the accumulation of fluids was a peritonitis of which many traces are to be found on the intestines. The coils of the intestines are adherent to each other and are gathered in a bunch under the stomach. The aorta, the urethra, and ureter are normal. The urachus is not yet closed at the umbilicus. Right kidney and bladder are present, those on the left side are wanting. The left ovary only is present situated immediately behind the umbilicus under the peritoneum. The Fallopian tubes are
present on both sides. The spleen is congested. In the lower left diaphragm are seen the openings made during delivery. The three umbilical vessels are normal. There is an umbilical hernia, a lumbar lordosis, and a separation of the pubis for a distance of 2 centimetres.

There were several other deformities, web fingers, absence of eyes, imperforation of the pharynx, etc., etc.
Case XXVI

Franqué (Wiener medizinische Presse, 1860, p. 812) & Heegott, chp. cit.

Ab, act 20. D para. First four pregnancies were normal, children still alive and healthy. At the sixth month of the fifth pregnancy, her lower limbs became very edematous so that she could hardly walk. This edema of the lower limbs was accompanied by a great increase in the size of the abdomen. So that at 6½ months she appeared to have reached full term. This distension of the abdomen was due to the development of the uterus.

As a result of this patient suffers from dyspepsia, which became so severe that it was decided to induce labour at the end of the 6th month. Labour came on spontaneously, however, soon after. There was a fair quantity of liquor amnii. The child presented by the breech. Though the uterine contractions were vigorous, however, the breech did not advance. Introducing the hands to find out the cause of delay, Franqué found that the abdomen of the child was enormously distended by some fluid accumulation
Case XXVI

Franque (Continued).

so that it could not pass into the brain. The feet were brought down and there traction made, but he found it necessary to puncture the abdomen by a trocar and evacuate the fluids before the child could be delivered. The child which was alive before its abdominal wall was punctured, was born dead.

There was some drama where following the labour, puerperium otherwise normal.

In making a post mortem of the foetus a considerable quantity of ascitic fluid was found still in the abdominal cavity, the bladder contained a small quantity of urine.
Case XXVII

Franqué (Vienna med. Presse v. 33 1866).
 (Herzott, op. cit. p. 136).

This is a note about a woman who had given
birth previously to several children. Two of whom
had been born with marked distension of
the abdomen by ascites and lived only a
short time. Her last pregnancy ran its
full course but for several days before
the labour set in she noticed that the
movements of the foetus were very feeble;
and she concluded it was affected in
a similar way to the others which had
died. When labour set in the treat
presented and was soon born without
difficulty, the shoulders followed slowly.
But the rest of the body could only be
extracted by strong traction. The child
was thin and imperfectly developed.
Its abdomen was distended with fluid.
It died in a few days. It was
permitted only to puncture the abdomen
"two glasses" of fluid escaped.

(The case is interesting as showing
the recurrence of foetal ascites in the
children of the same woman.)
Case XXVIII


The author records two cases of Congenital Bleito.

Case I. C. B. Oct. 22. I para. Labor set in at the 8th month. The foot presented. Labor was prolonged, the abdomen of the child which was distended with fluid being cause of delay. During delivery, a rush of fluid came from the abdominal cavity. Extraction was then easy. Child weighed 5 lbs. and was 14.5 inches long. The abdominal wall was ruptured in the ileoceleal region and thru the rent a coil of small intestine protruded.

PM. Liver, very large. Amyloid, and showed increase in its connective tissue. The Spleen also larger, sago like. Kidneys normal. Supra-renal's enlarged. There were several well marked ecchymoses in the thoracic cavity. Heart was large.

Musculature pale. No evidence of Syphilis in the breast.
Case XXIX

Schroeder. (Op. Cit.)

There was delay at the outlet and child was born with difficulty. Child weighs 8 lbs. 6 oz and is 15 in in length.

PM. The abdomen is markedly swollen and of a dark red glistening appearance. The largest circumference just above the umbilicus measures 32 centimetres. The child was born alive and made attempts at respiration but soon died. There is a dark band of discoloration, the breadth of a finger, over abdomen between the costal arch and the umbilicus. The abdomen was distended with fluid as was also the Tunica Vaginalis of the Testes. The fluid can be driven from the seratum into the peritoneal cavity but returns when the pressure is removed. Liver enlarged. Weight 8 lbs. Spleen 10 oz. The kidneys appears small and pale. The mother was syphilitic.
Antibes (quoted by Robert, op. cit.), 1890.

Jeanne L., age 14. Touched admission into the maternity at Strasbourg on Feb. 12, 1869.

Patient had well marked syphilitic condylomatæ on genitals. She stated she was fifteen days short of her full time. She had been in labor 12 hours before admission. Labor lasted altogether 24 hours. Child was a male. Small, weighht 2840. Grammes.

Abdomen was enormously distended with fluid as was also the serotum. There was a well marked punc/tique (Syphilis). It was born alive, but died in 25 minutes.

P.M. On opening the abdomen of the child 200 Panmses of clear straw colored fluid escaped. The abdomen still remains distended and it was noted that there was a second collection of fluid in a cyst. This cyst contained fluid of the same character as that which was free in the peritoneal cavity, and it formed a tumor. This peritoneal cavity ascended closer to the serotum compressing the testes. This cyst is formed by a
Case XXX

uterus. (Continues).

pouch of peritoneum covering the large intestine, closed above by adhesion and distended below by the fluid. This cyst was quite shut off from the lumen of the intestine and from the general peritoneal cavity. In the liver irregular tracts of chalky gummatous tissue were seen. The walls of the obliterated blood vessels were calcified. Lungs, heart and kidneys were normal. The liver only was examined microscopically, and it was seen that the vessels which appeared calcified were really so.

Mrs. C. delivered, 28th Sept. 1860, of a male child at the 7th month; first pregnancy. Head required some assistance to extract, after which no progress. Child being dead employed moderate and then strong traction till at last neck gave way; the arms were then laid hold of; but still the abdomen being too large to allow delivery, rupture of the walls took place, much fluid was evacuated and the child was easily extracted. The contents consisted of a clear fluid.

No p.m. allowed.

The same patient had an abortion some time after this; then on Dec 12 1861 was delivered of a female child at the full time. Here again the head was expelled very slowly, and the further progress was still so slow that although great of extractive force was employed through the head, at every pain, it was a considerable
Case XXXI

Bruce (Continued)

time before delivery could be completed. The cause of the delay was enlargement of the foetal abdomen, just as in her first case. The Peritoneum was found to be distended with clear serous fluid. The bladder also was greatly distended. Its coats were thickened. The intestines were of very small diameter.

Report of dissection by Dr. Pettigrew on parts of the organs removed. Bladder could hold 16 ounces of fluid. Walls uniformly thickened. The Right Ureter is patent and slightly dilated but does not open into the bladder. Left Ureter is normal. The meatus urinarius is partly cut thru; it is however patent and well defined. Uterus and Fallopian tubes present. Ovaries absent.

Reported by Matthews: Duncairn.
Case XXXII


Dystocia from enlarged body of child.

This case occurred in the practice of Dr. Carmichael in Burnetland and was communicated by Dr. Duncan to the Obstet. Soc. from a case of 70 days. First labor had been natural. Labor set in her second pregnancy at the 8th month. Her abdomen was unusually distended. Hydramnios. Thro' the walls of which the fetus was readily felt "much more turgid than natural and having an unusual soft feeling." The feet presented and after waitting four hours as no progress was made Traction on the leg was resorted to. 45 hours delivery. But everything was quite immovable. In making further traction one leg gave way and was separated at the hip. The hand was now introduced along the belly of the child, which was found to be enormously distended and soft. The abdominal walls were perforated near umbilicus, when
Case XXXII

Matthews Duncairn. (Continued).

At once there was a gush of yellowish brown fluid. By further tearing of the abdominal parietes the fluid was all evacuated and delivery was thus very easily effected. Patient made a good recovery.

P.M. on Footlo by Dr. Sanders and Pettigrew.


When refilled with fluid, Abdomen at Umbilicus measured two feet in circumference and contained 100 ounces of fluid. Pelvis and Scrotum normal. No testes in Scrotum. No anus.

The Abdominal cavity contained an enormously distended Bladder which filled nearly all the abdomen. 2) A sac or cyst in the left hypo chondriae region full of fluid.

3) Free fluid. Peritonæum.

Bladder measured 9 inches vertically and 6½ inches transversely and held upwards of 450 ounces of fluid. The muscular wall was greatly hypertrophied, in its lower two-thirds. In its upper third the muscular
Case XXXII

Matthew Dunsau. (Continued).

Coat was deficient. The walls consisting of the mucous and peritoneal coats only. The Urethra was imperforate and no openings of the Urethra could be found. The Urethra was impervious. The kidneys were represented by a large mass of cysts in the left hypochondriac region. (2) The single bladder was represented by a smaller cyst two inches in diameter, which was obstructed at both ends. The suprarenal was present on either side.

The oesophagus was impervious. The intestines were crowded upwards, back and to right. The Colon ends in a cul-de-sac attached to the posterior surface of Bladder. The liver was flattened against diaphragm by the effusion. The Pancreas was small thin and long. The Thorax was so completely pushed upwards that the Sternum lay almost horizontally.

There is no mention made of the condition of the Peritoneum. The Authors of the report are of opinion that the fluid in the Bladder was result of secretion from the mucous membrane.
Case XXXIII

Robert (Thèse de Strasbourg 1870).

Salomé L.... age 30. iT para. delicate constitution. First child, two years previous (1868). Labor normal. Child lived five weeks. During this her second pregnancy she suffered from loss of appetite and sickness up to mid term. Labor came on at full time and was easy. The child a male weighed 2.820 grammes was still born and resuscitated, but died shortly afterwards.

PM of child 24 hours after death. "There was found a oire colored serous effusion in the peritoneal cavity. The superior surface of the liver pale, intestine red, small intestine bright red. The inflammation appears, it was noted, only the serous membrane. lungs: dry; heart: voluminous, dilated. No effusion in the pleural cavity.

Case II (Robert) Case XXXIV

Case XXXV

Robert. Thése de Strasbourg.

The Author records the following case of
fetual ascites which came under the notice
and treatment of Mr. Aubenas.

La femme X. est 35 of robust health, had
given birth to four healthy children. labors
are normal. Arrived at the 8th month of her
5th pregnancy, fetal movements ceased and
labour pains set in a few days afterwards.
The child presents by the breech. The first
stage was normal and the feet were soon
born, but the rest of body could not be
delivered. The pains were strong and
strong traction was made on the lower
limbs. To diagnose cause of delay,
Mr. Aubenas passed his finger into the
vagina and recognized behind the
symphyse pubis a soft fluctuating
tumor. This tumor was the bladder-
like serousm free of fluid. Thinking
that the obstacle might be due to
an asctic distension of the fetal
abdomen and that the fluid
communicates with that in the serousm
Robert (continued)

he incised the serotum with a knife and immediately a quantity of yellowish limpid fluid escaped. A line of this was collected and a good deal escaped and was lost. In character it resembles the fluid got on puncturing an ordinary ascites. The foetus was then easily extracted; it showed signs of commencing maceration.

The placenta was of normal consistence but unusually large and thick. It weighs 950 grammes.

Post mortem examination of the child was refused.

Placenta urn normal.
Case xxxvi

Sir J. Y. Simpson.

(Selected Obstetrical & Gynecological Works. Edin. 1841).

Mrs. P. IV para a fortnight before her confinement was exposed to cold and wet while out walking. On reaching home she was seized with shivering which recurred frequently during the two following weeks. She did not feel the motion of the child after the night on which she first had pains and she believed it had been killed by the exposure to which she had that day been subjected.

During the act of parturition, after the birth of the head, the expulsion of the body of the infant was prevented for some time by the distension of the abdomen. The child survived for twenty eight hours it was plump and fat but cried only in the feeblest manner after birth and kept its legs drawn up. The abdomen was tense and fluctuation was indistinctly felt. On post mortem examination of the fetus some air and a quantity of fluid escaped when an incision was made into the cavity of the abdomen. Marks of suffocation.


Case XXXVI

Sir J Y Simpson. (Continued).

Inflammation was obvious both on the abdominal and intestinal peritoneum. From these surfaces about a teaspoonful of flaky puriform matter was collected. The intestinal canal was pervious throughout but the stomach, upper intestines and cecum were much distended with air.
Case XXXVII

King (G. Hospital Reports No V p. 508.)

(Sir J. Y. Simpson on Foetal Peritonitis)

Collected from 1871.

On opening the hydroptic abdominal cavity of a foetus of the 43rd month it was found to contain a considerable quantity of opaque viscid fluid, having numerous soft flakes of fibrinous matter floating in it. The natural gloss of the peritoneum was to some degree destroyed; and the surface was in parts slightly coated as with fibrina. The liver was reduced in size and had become much rounded in figure; its surface was opaque and somewhat thickened. With this organ the bowels were collected into a bunch in the middle of the superior part of the abdomen. The urinary bladder extended to the umbilicus, had a globular form and was so distended as to be capable of containing above half a pint of water; its coat was decidedly thickened. A little behind its summit a perforation was found, around which the vesicular tunics were much reduced as if by absorption
Case XXXVII

King. (Continued)

from the pressure of distension. This opening - perforation - was a simple fissure rather less than half an inch in length, and its margins were extremely thin. The ureters were enlarged for reasons and somewhat thickened. The kidneys were small. The urethra was imperfectly from the prostate gland forwards. Other organs seemed fairly normal.

The mother of this child was of strumous appearance. After having been married eighteen months she became pregnant with the above infant. She appeared to suffer from peritonitis at an early period of her pregnancy and subsequently continued more or less ailing and delicate. The premature parturition was preceded by an attack closely resembling peritonitis. The fetus, a male, was born dead with a true cuticle abdomen, and the abdominal parietes very considerably distended and attenuated.
Case XXXVIII

Olshausen. (Arzil für Gynäkologie
vol. II. 1871. p 280.)

Zur Aetiology der fasalen Peritonitis

The Author records the case of a woman who had given birth to nine children without aid. The children were still alive. In her tenth labour the head of the child had been born and the rest of body not following in spite of strong traction the midwife in attendance called in medical aid. Olshausen after also attempting delivery by traction and failing passed his hand into the uterus and found that the abdomen of the child was so distended that it could not pass the brim. An incision thru the walls of the epigastrium by seissor shaped perforator was not successful, no fluid escaping. As the cervicæ vertebrae had already by the energetic traction of the midwife been dislocated the head was cut off and podalic version performed and then delivery was accomplished. The mother made a
Case xxxviii

Olshausen. (Continued)

good recovery. P.M. onetus. Body well developed: full time. The abdomen was considerably distended especially in its lower half. The external genitals were malformed. There were no rudimentary that nothing but two little swellings were seen which from their position corresponded to the labia majora; between them was a small depression of the size of a pin's head. This was the external orifice of the urethra. The anal opening was only indicated.

On opening the distended abdominal cavity the changes met with were very evidently due to a general Peritonitis which had run its course. Nearly all the organs were adherent to one another and to the walls of the abdomen. The adhesions were formed by very thick jelly-like membranes. Where was there any appearance of pus.

The liver was adherent to the bowels below and Diaphragm above. These
Case XXXVII

Oesophagus. (Continued).

Jelly-like membranes were present in great abundance especially in the region of both ovaries. No part of the abdominal cavity was free from adhesions. After removing all the exudation three cysts filled with fluid were seen in the abdominal cavity. The smallest globular in shape lay close behind the symphysis pubis in the middle line and was the urinary bladder. It was about the size of a fist and contained almost clear fluid slightly acid. Behind this tumor also in the middle line lay a second cystic tumor larger than the bladder and also globular. It contained also an almost color less fluid, neutral in reaction and stringy in character. It contained some white flocculent material - epithelium thinnest bodies. The fluid of this fluid contained mucin traces of uric acid no urea. This swelling was the uterus distended by urine.
Case xxxviii

Olofsonii (continued)

The third tumor which was the chief one disturbing the abdomen was much larger than the other two tumors together. This was found to be the left coil of the large intestine containing a mixture of maeconium and urine.

The bladder communicated towards its lower part with the uterus. Its wall for most part thickened and hypertrophies showed at one part posteriorly a patch about size of a small piece very much thinned. Both ureters are dilated. Both kidneys were distended, by fluid in the pelvis of each organs. The cavity of the distended uterus was 10 Centimetres in length. Its walls were thinned all except the fundus which was not much affected. Though as much distended the fine folds of the mucous membrane still remained.

As before states it communicated with the bladder, it also com communated with the rectum. The bag filled with urine seemed from the arrangement of the
Case XXXVIII

Oldham. (Continued.)

folds on the mucous membrane to be wholly ulcerous; the vagina was therefore wholly wanting. The Fallopian tubes showed greatly dilated orifices and making a thick uterine probe. Beyond this they were distributed into distinct cases with a circumference of 8.5 cm. These swellings occupied the upper half of tube. The other half thickly enveloped in exudation seemed impervious.

The ovaries were often very much compressed by exudation. The Peritonitis was therefore most marked at the outer end of the tube. The lower part of ovary as we have seen was distended into a cyst which communicated with uterus.

Along with these malformations there existed a general peritonitis not recent which had led to exudations in the peritoneal cavity especially round ovary tube. The cause of the Peritonitis the conclusion was the urine passing along the Fallopian tubes from the uterus + getting extravasated into the Peritonaeum set up a Peritonitis.
Case XXXIX

Lohlein. Case of a Faint as.

Geburtshilfliche (Berliner Klinische
Wochenschrift No 28 1874 p.266)

"The Author was called to assist a doctor
who having delivered the head, in a labour,
by means of forceps was unable to deliver the
rest of the body. The patient was 34 years of
age. Two of her six previous labours had
been complicated by post-lapse of the cord.
One had been a twin labour. Labour
had threatened this time at the 8th month
but had been off. The region aurisii
was very abundant, Lohlein diagnosed
a congenital aetises and punctured the
abdomen. The mother made a good
recovery. The child weighed 2.305 Gr and
the placenta 1.134 Gr. There were signs
of peritonitis but no syphilitic lesions.
No history of syphils in parentes.

The Author in his paper in
stating he believes in the inflammatory
origin of Congenital aetises.

M. Sheel also records a case
of Congenital aetises with distended bladder
and peritonitis. That he had seen.
Case XL

Poirier. (Bulletin de la Société Anatomique 1876)

La nommée L. aged 35 was admitted on Dec. 23, 1875 into the Hospital of St. Louis. She was pregnant for the 6th time and in labour. History. First child delivered by forceps. Her 4th and 5th pregnancies ended in abortions. The others were normal. She had always enjoyed good health, no history of any syphilitic affection either in patient herself or her husband.

The present pregnancy had ran its normal course for 6 months. But then there was a rapid and very marked increase in the size of her abdomen. At the same time she suffered from oedema of the lower limbs. Labour pains came on at the 7th month and soon the head was at the vulva but the pains were strong and made no progress. The midwife who was in attendance showed patience for several hours and having made strong traction on the head without advancing matters, in order to find
Porak. (Continued)

out what was the obstacle to delivery. Twisted off the head of the child. She next brought down an arm and pulling on it too strongly tore it off also. She then sent for assistance and the doctor who came turned the foetus and brought down the legs which in turn were torn off in making traction on them.

She, the patient, was then removed to hospital where she was placed under the care of Dr. Porak. On admission patient was collapsed, face pale and pinched, hands on teeth, etc. The placenta was born and lay between the patient's legs. The uterine contractions had ceased the os was rigid, turned posteriorly. With great difficulty Dr. Porak introduced his left hand into the uterus and found that the abdomen of the foetus was greatly distended & evidently full of fluid. This was punctured by the hook at end of the forceps. There was a discharge of yellowish odorless fluid and the trunk of the foetus was
Porate (Continues)

then easily extracted.

She was taken in shock in a few hours.

Post mortem examination of the body.

Body terribly mutilated; head torn off; lower limbs torn off at the knees; upper limbs at the elbows. The body showed many bruises but was fairly well developed. The abdomen was still considerably distended; 45.6 lbs. at the umbilicus in circumference. It contained some citrine colorless fluids similar to that which had escaped after being opened. The peritoneum was thickened; it had lost altogether its normal translucence; it was pale. There were no adhesions between the cords of intestines. The liver was very large, the key portal being chiefly in the left lobe. Very firm adhesions were found between the right lobe and the parietal peritoneum.

There was a cyst the size of a mandarin orange containing bloody serum, but
Case XL

Porak. (Continued)

no hocklets. on the under surface of the liver no lesions were found.
Vena cava and umbilical vein normal, not compressed. Portal vein normal its ramifications not engorged with blood.

Kidneys were large, not tubulated.
Bladder not distended. Sphincter valves large. There were five small supplementary spleens.

Heart and lungs normal.

Post mortem examination of the mother showed an accumulation of bloody serum in the peritoneal cavity and rupture of the uterus.
Case xli

Kruytner. (Archiv für Gynaekologie Vol. X. p. 134)
1876

A. J. aged 33 Vi para. Says she is healthy but for five months has suffered from hoarseness and even aphonia. Four weeks before labor came on in her eighth pregnancy the abdomen increases greatly in size. Labor pains began when patient believed she was still four weeks short of full time. The foot was presenting and the membranes were ruptured artificially and an enormous quantity of liquor amnii escaped. - By vacuum - The first child died during extraction. Then a placenta was born. Then second placenta and next a dead fetus. Both placenta appeared to be normal. Both children were females. The first born shows distinct distention of free fluid in the abdomen. P.M. 15 hrs after birth.

It weighed 1650 grammes and was 47.5 centimetres long. Lungs contained no air. There were some petechiae at bases under pleura. The heart was markedly enlarged. Both ventricles
were of the same thickness. The dilatation is due as much to hypertrophy as dilatation its size corresponded to that of a 4 months child. Vena normal. The Peritoneal cavity contains 150 grammes of clear amber colored fluid. The liver was pale on section looked anemic Consistence normal, smaller in size than normal. The Spleen, intestines, Bladder, Urinary and Kidneys normal. The visceral peritoneum everywhere opaque. The umbilical vein, ductus Arantii (Ductus venous) normal. The Portal venous patent no change. The liver on microscopical examination showed very numerous heaps of round cells lying between the liver cells not merely at the periphery of the acini but also in the centre close to the central vein and three radiating to the periphery here and there transformation of these cells into fibrilae is seen. There is therefore a new connective tissue formation in the liver, diffuse in nature. For most part this is a new formation but in parts it seems as if it was of old charring.
The patient was a labouring, miserable, delirious woman 38 years of age and in her 10th confinement. She believes herself six weeks short of full time and that felt no movements for a fortnight. She had been in labour 23 hours, the first stage being completed in 8 hours. Good has been given and the head of a premature foetus was felt in the cavity of the pelvis. Forceps were put on as there was delay and the head was easily delivered. It was noted that the mother's abdominal was unusually large after the waters broke. After the head was delivered the body refused to follow in making traction. The head was torn from the body. Ultimately the child was born. It had been dead for some days. Diseases generally were obstetric in the perineum, there was an accumulation of serous fluids with fibrin floating in it. Heart, normal. Hairs and hair's not beautiful. Cause of death was ascertained in the death of Pyrexia in 93 broker.
Case XLIII


The Author records a case of Ascites in a full term fetus. The mother was 25 years of age and had had one child previously. She had suffered from Syphilis. Her first child dies when 1 year and nine months old from Convulsions. During her second pregnancy she complained for the last three months of pain in the abdomen and had been treated for deep seated peritonitis. Labor came on at full time and was normal. The child a female weighed six pounds lives only one hour. Its abdomen was enlarged and distended with fluid of a reddish tint. There were flakes of lymph on the surface of liver and spleen and several thin viscera. There were inflammatory adhesions between the fundus of the uterus and the abdominal wall and the lower uterine coils.
Case XLIV

Vol. XIX, p. 120. 1878.

A.B. aged 21. was in the 4th month of her second pregnancy when labor came on. (Her first pregnancy had ended in a miscarriage at the 4th month.) The labor was prolonged though pains were vigorous. The foetal head could be felt on vaginal examination very small and the head of a second foetus could just be reached. Only one foetal heart corresponding to the presenting child could be heard. By powerful traction with forceps the head was brought down externally, but no further, although the fundus was divided. The abdomen was then found to be distended. It was perforated through the diaphragm giving way to a clear fluid. The body then descended a little but was soon again arrested. A second tumour was recognised in the abdomen and it too was perforated and more fluid escaped after which the foetus was easily extracted.
Case XLIV

Galabin (Continued).

This second swelling was found afterwards to be the distended bladder. There was much oedema of the abdominal wall from the umbilicus downwards and a part of the firm is. The second child was dead. The Placenta was single and appeared to be healthy.

P.M. report by Galabin and Hilarius. Resümé: the fœtus one of twins is a male, in length 13 inches and appears to be somewhat more than a 4 months child. The abdominal walls show evidence of having been greatly disturbed and from the umbilicus upwards they are very thin. "The Peritoneum is thickened, has lost its smoothness in places and here and there a distinct but delicate film of lymph can be peeled off from it." Left side of liver as heretofore to bladder but no other adhesions exist. The heart is healthy liver normal. We are therefore of opinion that the oedema was inflammatory in origin.
Case XLIV

Galbinis (Continued).

The bladder is closely united with the abdominal walls in front up to half an inch above the umbilicus. It seems probable that the whole of the portion of the abdominal within the abdomen has become developed into the bladder. It is also possible however that adhesion between two surfaces of peritoneum may have taken place at a very early period of foetal life. Both ureters are distended. Left kidney is cystic the right small but appears healthy.

The urethra is poroous from the extremity of the penis as far as the neck of the bladder but at that point it is seceded. Bladder walls are thickened. The mucous membrane of the anterior wall of the bladder is uneven and deeply congested. The corresponding portion of the abdominal wall is edematous.

Under the microscope the greater part of the thickness of the bladder wall appears to be due to excess of muscular tissue. There are no deposits in the viscera nor other evidence of a constitutional cause to account for the condition found.
Case XLV

Letulle. (Thèse d' Agrégation de Hertzog).

Paris 1878.

No trace of syphilis. The labour was slow
the breech presented. The child was dead
born and presents an enormous
distension of the abdomen, due in part
to ascites in part to an enormous liver.
Ascitic fluid: 300 grammes, was yellow
serum colored slightly bubris. Very albuminous
and contained some fibrinous flocculi.
There were also recent inflammatory
adhesions between the coils of intestine.
The false membranes were thin and
whitened in appearance. The liver was
enormous; it's surface smooth, no
perihepatitis, but very marked hepatostegal
hepatitis. The umbilical vein is empty and
permeable. Kidneys normal. Suprarenals
enormous. Spleen large and firm.

Other organs healthy. The bones showed
very marked syphilitic changes (Syphilis
otes chondrite). In spite of any definite
history of Syphilis in the mother, he
considers that the Peritonitis was Syphilis
in its origin - possibly paternal.
Case XLVI

Lust. American Journal of Obstetrics 1878

A.C. primipara, single, Age 24. A nervous, excitable woman began to complain of pain on Feb. 18. Patient's abdomen was very distended and respiration very easy. In labor, on March 1st, the membranes ruptured, the discharge of liquor amnii being very profuse. The head at once descended and was all that could be well and Dr. Hark left the case in charge of his house physician. As no further progress took place after waiting for some time the arms were disengaged from beneath the pubis. Still no advance, so the hand was introduced into the uterus and the instrument to delivery was found to be due to the enlarged, fluctuating abdomen of the child. Delivery was finally accomplished after great difficulty.

The child was still born and Asphyxia.
PM by Dr. Manning. Head deeply exposed. Abdomen largely distended. Odors, fluctuates dull on percussion.
Case XLVI

Lusk. (Continued)

on making an opening between the
umbilicus and pubis a pale straw-
colored fluid escapes. This was found
afterwards to have come from the Bladder.
A second opening higher up, into the
peritoneal cavity permitted more clear
fluid to escape. The abdominal fluid
contained colloidal masses. The
vessical and peritoneal fluids together
measured 28 ounces. The mixed fluids
were analysed.

Color: pale clear straw-colored
no odour, acid in reaction. SG: 1004.
No albumen, no mucin, no sugar.
The Microscope shows crystals of Calci
Squamous epithelium a few blood
corpuscles, a few rod shaped bacteria.
The lower two thirds of the abdomen
was occupied by a large sac. The bladder
with hypertrophied walls. There was
congenital occlusion of the Urethra.
Urethra: dilated, heart normal. Pelvis
of kidneys: dilated. Small intestine 2 feet
long, large intestine 1 foot long.
Rectum and anus normal.
Case XLVII


The author reported to the Obstetrical Society of New York a case of twins in the first of whom was a marked ascites. He found the mother in strong labour one foot protruding from the vagina. Another medical man had been in attendance but had left the case. The one leg had been almost torn from the body and was attached only by a strip of skin to the body. The other leg was broken near the knee. The mother's pelvis was blocked by the enormously distended abdomen of the child. The abdomen was opened by a bistoury and a large quantity of serous fluid escaped. Delivery was then very easily accomplished. The child was a male somewhat thin. There was no edema or anasarca elsewhere. No PM was permitted. Second child was normal. Mother made a good recovery.
Case XLVIII

Charles. (Archives de Zoologie 1886 p.236)

records a case of woman Aet. 43 who
had had eleven previous pregnancies of an
ice-pick miserable appearance, indicating
great privation. She had had twins three
times and foreept had been used in five
other labors; of her 14 children three only
were alive. When seen by Charles she
was in labor but this pregnancy only
dated from 7 months previously, her abdomen
was greatly disturbed - Hydrothoia.
The foot presented but in spite of strong
traction delivery could not be accomplished
after introduction of the hands into the
uterus. The cause of difficulty in delivery
was found to be due to an enormously
distended abdomen. It was beyond reach
of perforator (!) so strong traction was
made to try and bring it down. In
during as bothhip joints were subluxated.
Finally, abdomen was perforated and an
abundant yellowish fluid escaped.
There was also Hydrothoia and Hydrometra.
The Placenta was adherent and had to
be removed artificially.

The author records the case of a patient Ael.39 who had had seven children previously. In her eighth pregnancy she suffered from faintness and dimness of sight. There was marked drop of the Anion. When labour came on the face presented.

Pudalgie version was performed and the feet brought down, but the body of child could not be brought thus the brim. The largely distended abdomen of the child having been recognised as being the cause of the delay and difficulty in delivery it was perforated by means of S-melli's Scissors and about 3 pints of serous fluid escaped after which delivery was easily accomplished.

Autopsy of the foetus showed that the bladder and kidneys were healthy. In the right Supra Renal Capsule was a large blood cyst which extended up as far as to press on the Portal Vein at its entrance to the liver. This obstruction to the Portal circulation, Herman believes accounted for the Acrifies.
Case 1

Trolagyroscopy.

(Franeur Med. Praxe. 1852. No 36)

Systolecia due to Ascites & Distended Bladder
of the uterus.

A 38 year old 41 year old had always enjoyed
good health. During the latter months of
her fifth pregnancy patients abdomen
was unusually large. She delivered
the first stage of labour was normal, and
the head was born but the midwife in
attendance was unable to deliver the rest
of the body. After having torn off the head
of the child in making traction on it
she sent for Trolagyroscopy. It, placed
the diaphragm of the child with the
fingers passed thru the chest wall.
A large quantity of blood escaped
a second time the distended bladder
was next torn into and the labour
was soon over. PM in fact. The
abdomen was very distended. The Rectum
ended blindly. Pelvic organs were undeveloped
Pen is unmentionable & not pervious. The
umbilical vein pervious from navel to liver.
The Peritoneum was so thickened that
it was with difficulty opened into
during the operation liver very large.
Case 21
Preston. (Lancet July 7, 1883. p. 11).

Rupture of the uterus caused by ascites of the foetus. Secondary haemorrhage on the fifth day. Death.

The woman who gave birth to the ascitic foetus was 35 years of age and had given birth to six children previously, children all healthy and confinements normal. In her seventh pregnancy there was excessive amount of liquor amnii. Labour came on at the 8th month. Pains were good but forceps were required to aid delivery. The head having been delivered the arms were brought down and strong traction made but the body moved not follow. The hands was introduced into the uterus to find out what was obstructing delivery and this was found to be the Abdomen of the Child greatly distended with fluid. The abdomen of foetus was perforated by scissors and a great quantity of serous fluid escaped. The Cervix was badly torn and tear extending into the body of uterus. Mother died on 5th day. Postmortem.
Case 211

Porak.

(Urgency: op. cit p 13).

Femme C. Age 23. 11 para. First pregnancy ended in an abortion at the 7th month. Cause Syphilis contracted during pregnancy. On admission to hospital the cervical glands were still enlarged. She had undergone no treatment for the Syphilis. Labour set in in her second pregnancy at the 8th month. and was normal. The child a female lived only a quarter of an hour. The placenta very friable, very thick weighed 933 gr. The liquor Amnii was very abundant.

On making a post-mortem examination of the foetus there was found Ascites liquid yellowish + + + + + + + + + + + + + + + . Acute general peritonitis: liver even more. colour pale. Nothing on the surface but on section two small syphilitic gummatas were found. Other organs normal.
A B. at 24, contracted Syphilis in the second month of her 1st pregnancy, aborted at 6th Month. Five succeeding pregnancies terminates as follows: 2nd at 6th Month, 3rd + 4th premature children born alive but dies shortly afterwards, 5th full time foetus born alive, 6th terminated in an abortion at the 6th Month.

In this her 8th pregnancy labor came on probably about full time. (There was marked Hydramnios). During labor there was slight accidental hemorrhage so forceps were used and the head and thorax delivered with great difficulty. Strong traction failing to accomplish delivery of the body four fingers were introduced into the vagina and passed along the trunk of the child. When it was found that the obstacle to delivery was a large diameter abdomen, Paracentesis had been decided on but delivery was accomplished by careful traction. The child was born deeply cyanosed and died fifteen minutes
Truzzi. (continued)

after birth. P.M. by Professor Pomper.

chief a female weighs 2.370 grammes.

General nutrition defective. The abdomen

was enormously distended (Circumference

at umbilicus 49 Centimetres) by a

collection of fluid in the peritoneal cavity.

The fluid was straw colored, very rich in

albumen. Alkaline reaction 5.4. 1002.

Some enlarged veins could be seen

raining through beneath the skin of the

abdomen. There was oedema of the

Spleen and Thoracic walls. Heart is

normal. Lungs contains no air.

The abdominal cavity is filled by an

enormous liver, 160 grammes in weight.

The Spleen is enlarged and congested

and weighs 160 grammes. There was also

a collection of serous fluid forming a

distinct cyst between the layers of

the peritoneum covering the intestine.

Kidneys normal in appearance & consistence.

Cauter Microscopic examination by

Staurephi & Stefaniu shows nothing

abnormal in the liver, spleen & kidneys.

There was a velamentous insertion of the cord.
Case LIV

Crandall. (The Medical Record April 1885).

In the course of a confinement the head and the shoulders had been expelled without difficulty; but it was very difficult to extract the rest of the body because of the abnormal size of the abdomen. When this was at last accomplished, the superficial veins of the abdominal wall were seen to be prominent. There were the physical signs of an ascites. There was marked cyanosis and dyspnoea of the child. A capillary puncture in the abdominal wall led to the peritoneal cavity little. The ascites permitted a clear amber fluid to drain off. This was not urine. The child was slightly cyanosed but was otherwise quite well. The fluid was not evacuated; the child lived and the fluid was gradually absorbed. By the 14th day it had all disappeared. The child then took a capillary bronchitis and died on the 19th day.
Case LV

Berthod. (2)

(L'aspect chez le foetus. Angleterre. 1887.)

A B. 26. was admitted into the maternity hospital on the 9th of August 1886. She was of good constitution and had always been regular. She was pregnant for the third time. Her abdomen was unusually large for the period of the gestation. & the distention appeared to be due to an excess of liquor Accumbii. The os was about size of a florin and the breech was presenting. Labor was tedious. Membranes ruptured spontaneously the following day. The liquor Accumbii was not excessive and as the abdomen was still very large after it had escaped the diagnosis of tricus was made. Fracture having been made on the lower limits of the foetus they were brought outside the pelvis, but the extraction could not be carried on further. The breech was arrested at the trunk. As the pelvis was known to be normal it
Case LV

Pochard: (Continued)

two fingers were introduced along the
Anterior surface of the uterus and it was
then found, the abdomen of the foetus
distended by fluid was the cause of
the obstruction. The abdominal wall
was punctured in the middle line by
means of a trocar and 1.150 grammes
of straw colored ascitic fluid escapes.
The foetus was then easily extracted.
It was a male—dead born of course—and
weighed 1.690 grammes. Its abdomen was
very large. The placenta and membranes
were normal. The mother recovered
but the puerperium was complicated
by pelvic inflammation and a septic
pneumonia. P.M. on foetus.
Liver: Small. Splenic hard. Weighs 60 gmms.
The microscopic tissues a proliferation of
the perivascular cellular tissue; all the
characters of a portal Cirrhosis. The
Specimen liver weighs 15 grammes. The
intestines & all other organs normal. In
a word all the signs of Atrophic Focal Cirrhosis.
Case LVI

Berthod.


A. B. 27. 11 para admitted to the maternity hospital on Oct 12/86. Patient was healthy
not syphilitic. Her pregnancy had proceeded normally, labour pains however
set in at the 8th Month. Shortly after
admission patient was delivered of twins
The first born weighs 1720 grammes
and the second 650. Both made a few
inspirations but died in a few
minutes. The abdomen of the first
child was distended by fluid. 500
grammes in all. presenting are the
characteristics of an ordinary ascitic fluid
"The characteristics macroscopic and micro
scopic of the liver and of the spleen
are exactly those which these organs
present in a case of Cirrhosis in the
adult."


Case LVII

Peter. Centralblatt für Gynäkologie
1889 5 114.

A B 311 para suffered from dyspnoea at 58 days from last pregnancy owing to an excessive distention of the uterus by the Amniotic fluid set in prematurely. Peter was able to palpate the large heart of the child in the upper pole of the uterus and the small heart below between them. There was a balloon-like swelling. The feet were bough down, and strong traction made on them, as notwithstanding uterine pains no advance was made. It was found necessary before delivery could be accomplished to puncture the abdominal case of the foetus. 2½ litres of fluid were thus evacuated, and the labour was soon finished. The child which died during delivery weighed 4000 grammes after the fluids had been drawn off. P.M. by Paracentesis the umbilical cord very long, 91 centimetres mete. Twisted.

The umbilical vein showed several varicose dilatations. The cause of the death was the venous hypostasis in the lower extremities. Of the dilatation of the umbilical vein and of the Hydramnios he considered was the complete absence of the ductus arteriosus.
Case LXXXI

Courmont. (Lyon Free Times. Feb 16, 1890.)

A.B., aged 21. In poor health and of a tubercular diathesis. The labor was prolonged and difficult. A considerable time elapsed after the delivery of the head before the delivery of the abdomen which was of an enormous size.

The child was very exsanguated when born. By immediate puncture of the abdomen 300 grammes of fluid were withdrawn and immediately a marked improvement in the child’s condition took place.

Analysis of Fluid.

The fluid was transparent yellow alkaline and contained flocculi of fibrin. It contained albumin, urea, sodium chloride and phosphoric acid. There was no sugar and no bile.
Case LIX

Jilden. (Ein Fall von Geburtshindernis
infolge von übermässiger Ausdehnung
der kindlichen Harnblase mit gleich-
zzeitigem Ascites. Frühjahr 1890. Thesis)

The patient was pregnant for the sixth
time. Her husband for the last three
or four years has been troubled with a
skin eruption (Syphilis). Her first two
children were born at full time and were
still alive. Next three were all born
prematurely at the 8th month. The last
of these three was born with ascites and
died soon after birth. The two others
also died soon after birth. In the 6th
pregnancy, labour came on at the 8th
month. The feet presented, but in spite
of traction the buttocks would not come
down. It was suspected that it was
a case of Cockes twins, but finally
the obstruction to delivery was found
to be due to the edema, or more dilated
abdomen of the foetus. Both lower
levers had been for a while in making
traction on these. Eventually the was
Case LIX

Tilden (Continued)

performed. When the abdomen of the foetus was opened during the operation a large quantity of clear bright yellow fluid escaped. The body was then easily delivered.

Post Mortem Examination of the Foetus. (Note)

The specimen shows signs of maceration. The mucous membrane is still present. The corner of the penis are wanting in consequence of the attempts at extraction during labour. The abdomen is enormously distended. Measuring 40 Centimetres in circumference. In the abdomen is a fluid mass of 16 Centimetres long and 8 Centimetres broad. This mass which presents a well marked contraction at its upper end is the distended bladder. It does not communicate with the umbilical cord. The part above the constriction was supposed to represent the bladder. The bladder walls were on the average 5-6 millimetres in thickness, the
muscular coat being specially affected.
Both ureters communicated with the bladder
but the vesical orifices of the urethra could
not be found. Parts of the mucous
membrane of the bladder were calcareous
due to incrustations of lime salts.
The Rectum was adherent to the posterior
wall of the bladder and ended blindly
but did not communicate with the
bladder. The Testicles were present, the
prostate was absent. The kidneys were
connected by a band of tissue so as
to present the appearance of a simple
horse shoe shaped organ.
The Ureters are curvved and dilated.
The Spleen fairly normal. was of
form consistence 3½ Oims. Long
½ broad and one Centimetre thick.
The liver was pressed against the under
surface of the diaphragm. Its Capsule
is smooth. The intestines are gathered
in a bunch under the liver.
The Heart is normal.
Case LX.

Dührssen. (Centralblatt für Gynäkologie. 1891, p. 426
Moriu Herzog in Übers. Bedar. der Frucht (1891)

Dührssen was called in to assist at the labour of a woman, 30 years of age, 7 para. Four previous labours had been normal. She believed herself to be only 8 months pregnant. The waters had escaped when Dührssen saw her first and seemed to have been in an unusually large amount. (Hydramnios) Not withstanding the escape of the waters the woman's abdomen was still very large so that Dührssen thought he had to deal with a false time foetus. The child's head was at the outlet and forceps were put on and head was soon delivered.

In spite of strong traction on the arms & head the rest of the body could not be delivered. Dührssen diagnoses that the oblique to delivery was the extended foetal at the arm and pulvinar in much fluid escaped. The opening was made thus the diaphragm was so it was impossible to reach the abdomen wide made for the arm of the child was firmly wedged in the maternal passage. The child which was alive
at the beginning of labour was born dead. It was a female twin formed corresponding in its development to that of a seven months fœtus.

Circumference of child at the level of the umbilicus was 440 Centimetres

The Placenta was large, soft, edematous and anaemic.

P.M. Examination of Fœtus showed a simple ascites. The mother had had very recent menstruations. The father of child was healthy.
The Author records the case of an English lady, Act 39 TV para, who suffered from Hydramnios in her fourth pregnancy and who was delivered of a child with marked ascites. The patient noticed her abdomen becoming unusually large after the fifth month. This increased very rapidly so that at the 6th month she was larger than she had been previously at full term. During the last three months she lost flesh and became very emaciated in the upper part of the body. She suffered also from breathlessness, etc. Her urine indicated Renal Congestion.

Labor. Painless first stage. Membranes ruptured during sleep. Head was rapidly born and then there was strange delay. With pressure from above, however, and strong traction the body was born. The abdomen was dorso-ventral 17½ inches in circumference. The child was deeply cyanosed and soon died. There was dissection of the cord. Further has a fibrosis on the fundus uteri.
* I am indebted to my friend
Dr. Ballantyne for furnishing me
with the report of this case which
is shortly to appear in the Edin. Hoop. Reports.
1593
Case LXII

Ballantyne. (Hospital Reports. 55 in 1893.)

Mrs. Act 30 primipara. Had suffered from a free force vaginal discharge for some months before labour, but was otherwise healthy. Labor which set in at the 8th month was normal. 9½ hours duration. Head presented. L.O.A. The patient died somewhat suddenly the day after labour; the post-mortem reveals a diffuse peritonitis due to Gonorrheal Sepsis, puerperal and ovaritis. (ruptures during labour?)

The child a male, weighed 6 lbs. 14 oz. and was 19½ inches in length. Its abdomen seemed more distended than normal but it was otherwise healthy in appearance.

The Placenta weighed 173 yoz it seemed normal. Umbilical cord 24 inches in length. The thoracic cavity was diminished in its vertical diameter. Heart normal. Stomach normal. Lungs congested. They were enlarged.

The liver was enlarged of firm consistence
Case LXII

Baelantyns (Continued)


The bladder was distended with clear straw-coloured urine. The fundus reached as far as the umbilicus. Diameter. Transverse 4 cm. Vertical 3.1 cm. Its walls were thickened the urine contained uric acid, urea and albumen. There was a membranous septum in the urethra a little in front of the symphysis pubis. If the canal was by this means rendered imperious is doubtful.

In the peritoneal cavity was 30 cm. of straw-coloured fluid. There were no flakes of lymph in it nor were the intestines extensively adherent to the anterior abdominal wall. The colon was friable by slight adhesions to the vesical walls.

Microscopic appearances of the visceras revealed nothing special. There was a slight increase in the connective tissue.
Ballantyne. (Continued).

of the Spleen and liver. The Peritoneum was slightly thickened.

The Author is of the opinion that

the Ascites is so frequently found associated with a distended condition

of the bladder in the new born infant there is not evidence enough to conclude

that the former is caused by the

latter. Most cases of Ascites he

thinks must in the foetus have

an inflammatory origin.

He notes the presence of Gonorrhoea

Peritonitis in the mother of his case

and suggests the possibility of

the transmission of the virus from

the mother to the child which

might therefore have been the

cause of the Peritonitis and Ascites.

The congestion of the organs he

considers to have been caused

by the asphyxiated state of the

child.
Literature in addition to these: 62 Cases.

Boschi: Riforma Medica 12/12/88.

The author records a case of congenital ascites, associated with hydramnios, and enormous hypertrophy of the placenta.

Caballero. (Distocia por Ascites del feto)


Ronaldson.

(Edin. Med. Journal. XXII. p. 128.)

Dr. Ronaldson showed a foetus with intra uterine peritonitis and dilatation of bladder, uterus, & kidneys. One kidney was only partially developed.

Steven.

(Parl. and Clin. Soc. Glasgow 1865)

Dr. Steven showed a newborn infant with ascites.

Steinberg. (Schmidt's Jahrbuch)
The author records a case of twinus, one of whom was dead. There was no special difficulty in its delivery. Ascites is said to have been the only morbid condition present, the different organs all being apparently healthy.

Schlesinger. (Schmidt's Jahrbuch)
Vol XIV. p.46
Case of Congenital Ascites causing Dyspnoea. The only note as to the abdominal organs is that the liver and kidneys were of unusual size.

Hohl. (Die Geburten Miingestalter Kranker und Toter Kinder)

Herzstein. (Über Ascites der Frucht
Thesis Berlin 1891.)

Hergott. (Les Maladies Fœtales qui peuvent faire obstacle à l'accouchement. 1878)

Cornelli. (Mémoire med. 1879.)
In all the Text Books on Midwifery reference is made, under the head of Hypotocia due to the Toxics, to Ascleps. I have consulted the best known of these text books. Vincel and Charpentier give the literature of the subject very fully.

In connection with this Thesis, I have among other Books consulted the following.


The Collected works of Sir J. Y. Simpson for Articles on Hermaphroditism and Extra Uterine Peritonitis.

Text Book of Human Physiology by Landosi and Stirling.

Principles and Practice of Medicine by Hilton Gage.

etc.; etc.; etc.

8 Melville Crescent Edinburgh
April 29, 1913

WM Jordyce M.B.
Finis.