The Pathology, Diagnosis, and Treatment of Ovarian Dropsy.

by

Thomas Dalton
I beg to apologise to the Professor who receives this essay for having written on both sides of the paper to state that the impropriety of this did not strike me until I had nearly finished writing it out, and then I should have re-written it, but unfortunately I had not time to do so.

On these grounds, therefore, I hope for this unwittingly causing any extra trouble in reading it.

Thomas Dalby
In the following essay, I propose to consider the Pathology, Symptoms, Diagnosis, and Treatment of ovarian dropsy, but more especially the latter; the chief object being to decide upon the relative merits of palliative treatment—by the various methods which have been proposed—as of radical by means of ovariotomy.

This disease, I think, by most authors, considered to be due, in a great majority of cases, to accumulation of fluid matter in the Graafian follicles.

Burns objects to the name, for he says it is not due to an increase of a natural secretion, or spilation, but is of the nature of Cystic Sarcoma. Lee, Traut says it always begins with scarlatina; it is indeed only a symptom of it; this however is emphatically denied by Dr. W. Hunter, Burns, and Blindell. I suppose a great majority of Pathologists will agree with them, indeed it is not easy.
to see what effect scurvy has on the production of the tropical state; moreover, if by scurvy has been means a malignant growth, there would be every reason to believe that the disease would run a more rapid course, and fatally far sooner than it does in a majority of cases. Undoubtedly scurvy may consist with ovarian disease, but this by no means proves that it produces it. Croizet, however, thinks that one Graafian vesicle may increase to an enormous size, Seymour in his essay on the diseases of the ovaries also states this to be his opinion. There does not seem to be any reason for doubting it.

Multilocular cysts are however much more common, so these may arise from the enlargement of several Graafian vesicles, as according to the opinion of some Pathologists, which would appear to be the opinion of Dr. Burns. They may be due to the formation of cysts in the connective tissue or cystic sarcoma.
It is quite possible that both these views are right, but probably in a majority of cases it is owing to the former cause; this opinion is strengthened by the fact that in examining the ovaries of old women, Graafian follicles are often found much increased in size, being as large as almonds instead of the size of millet seeds, filled with a limpid fluid having their internal coat increased in vascularity (Seymour). Usually there are one or two cysts of much larger size than the rest. These are says Dr. Simpson usually two predominate cysts one superior the other anterior—Burns says the cysts are in various stages of development varying in size from that of a pea to that of a child's head, one large one may be as large as the gravid uterus at the full term—These cysts as the disease advances often open into one another, this appears not have been recognized till lately for Dr. Blundell writing in 1839 mentions as a remarkable fact that in a case of Dr. Clain's all the cysts communicated.
so that all were emptied when one was opened into
The tumour, following the general rule,
Row in the direction of the least
Resistance, that is, upwards and forwards.
The walls of the cyst vary slightly
in thickness; they may be as thin as paper,
or as thick, or even thicker than the hand.
The thickness varies in different cysts, even in different parts of the same cyst.
The inner surface of the cyst is usually
smooth, but not always so, for sometimes
there are small vesicles or cysts, which
Burns compares to the papilla on the
inside of a cow's udder.

The consistency of general character
of the fluid vary much, it may be
more watery serum or glutinous;
clear, bloody, or purulent; moreover
these cysts have been known to contain
lettuce juice. In the Lancet for 1853
Dr. Gray records a case where a cyst
was found to contain true brain, this being
verified by a careful microscopic examination.

Dr. Churchill says: 'The only rational explanation
of the presence of the latter (these foreign
bodies) is the supposition that two forms may be enclosed in the same vesicle, whilst one becomes the seat of dropseal accumulation, the other by some means is stimulated into partial development. I do not believe this; certainly the Churchillian explanation may be applicable to some cases, yet it is apparently too general a statement as three curious bodies have been found in the ovaries of bovines—

"the consistency of the fluid often varies in different cysts in the same ovary—

the quantity of the fluid varies as greatly as its consistency or general character, thus may only be a few ounces or several gallons.

The museum of the College of Surgeons in London is a bursa measuring four feet in circumference in one direction, there is the other; Chevalier states that he tapped a cyst containing 17 gallons. The lumina are indeed so large that they sometimes fill up almost the entire cavity of the abdomen being in fact larger than the gravid uterus at the 9th month. They give rise to very distressing symptoms. Blindeld says that as the disease advances the fluid becomes more and more blood, so that in cases where it flowed quite easily the
at the first it would not do so at subsequent tappings; this does not seem the general opinion, but rather the reverse.

The term ovarian dropsy is often loosely applied when it have been included by various authors the following diseases:

1) Simple serous cysts clustered together or attached originally to the peritoneal coat of the broad ligaments, Fallopian tubes or ovaries.

2) Dropsy, iatralation of the Fallopian tube. These accumulations are however very difficult to diagnose for true ovarian dropsy, during life, even after death the task is sometimes by no means an easy one. This only can justify their classification with ovarian dropsy.

3) Ovarian cysts containing hydatid or ovarian dropsy caused by true hydatid in the organ. This if it ever occurs must be very rare. Bucycele records an instance of it. "But" says D. Simpson in the Cyclopaedia of Medicine "the fact of his demaying vessels on the parieties of the hydatid vessels renders even that instance more than doubtful."

Causes

Very little appears to be known of the causes of this disease. Dr. Burns thinks it is most frequent in persons of a despondent habit of body; probably, he is right.

Dr. Lee in the Lancet (vol II, 1837) relates a case of confusus ovaria; probably there are I believe two or three others in record.

There is great diversity of opinion as to the relative frequeney in the married and unmarried.

Dr. Burns, Churchill, thinks this is more frequent in the married. Dr. Tanner says of 136 public cases, 88 occurred in the married, 37 in the single and 18 in the widowed. But, even if the disease was proportionally more common in the single, we should expect to have a greater number of married women affected, because of the greater number of married than single women. Dr. Simpson thinks it is about equally common in both. In the absence of any extended statistics this may be accepted as the most correct.

Symptoms

These may be considered in two stages:

1. Whilst the tumour is in the pelvis.
2. After it has ascended into the abdomen.

Dr. Burns speaking of the whole course of this disease says, the symptoms are owing to three causes (a) Pressure, (b) Sympathetic irritation, (c) Action (mostly) carried on within the ovary itself.
Symptoms Whilst in the Pelvis

This stage of the disease is very frequently passed before any medical aid is sought. However, it will be useful to consider some of the principal symptoms such as the following:

1. Sometimes at the first pretty acute pains are felt about the joints, thighs, lower part of the abdomen. There may be disturbance of the bowels, chills, and sometimes syncope.
2. Pains may be felt very early in the mammary.
3. Robert says that pain is usually felt on the same side as the ovary affected—bath relates a case where mela lymph was secreted early. The tumour may fall down between the vagina & rectum. Other it may give rise to symptoms of more or less importance, such as dysuria or retention of urine, requiring daily use of the catheter, prevention of the passage of solid feces, together with diarrhoea. Hemorrhoids may also be produced by this pressure. Sometimes one foot swells early in the disease.

Diagnosis

I making our diagnosis we not only attend to these symptoms, but are greatly aided by feeling a tumor which fluctuates more or less distinctly,
between the uterus and vagina. – Mr. Churchill says that in making such an examination we should pass our fingers beyond the tumour so as to feel the fundus uteri; otherwise we might mistake it for a retroversion of the uterus.

Then if the tumour continues to increase after a few weeks or months begins to rise in the pelvis, or even appears low in the abdomen, we may be pretty sure that it is a case of ovarian dropsey. – Amenorrhea may or may not be irregular, but usually it is not absent. There is often a great amount of flatulence whilst the tumour is still small. This adds greatly to the difficulty of diagnosis, as moreover sometimes one of the most distressing symptoms.

However the symptoms in this stage of the disease are very obscure and the diagnosis very difficult. It is nevertheless of no very great importance as the treatment - even if the diagnosis was accurately made would be merely palliative, moreover as I said before the medical attendant is rarely consulted at this period of the disease.
Symptoms after the tumour has risen into the Abdomen —

The tumour has been known to attain a great size without entering the abdomen at all, but to remain in the pelvis it almost completely fill it up. Morgagni relates a case of the kind in which the ovary weighed 24 pounds — such cases are however very rare.

After the tumour has risen into the abdomen, scarcely any inconvenience may be produced except that arising from the mere weight of the tumour — or examining the abdomen a tumour, which fluctuates more or less distinctly, according to the thickness of its walls is felt; but in cases of ovarian dropy there is generally a certain amount of ascites; a sort of double fluctuation might be felt — if the ovary is not very greatly enlarged, the tumour will probably be felt either at one or other side, but centrally; but when it is very large such is not the case — the uterus may be drawn upward so that the urinary bladder becomes elongated, but this is more particularly the case when both ovaries are affected — then there are various symptoms arising from pressure of the tumour on various
organs. Again a loop of intestine may lie between the tumour & the abdominal wall giving rise to colicky pains. The general health of the patient is not materially interfered with for a long time, but when the tumour becomes very large it proves too to want of sleep, the pressure on various organs gives rise to a long train of symptoms such as palpitation, dyspnoea, tendency to syncope, vomiting, obstruction & secretion from the kidneys & liver thus laying the foundation of organic disease in them.

Menstruation is usually regular but it may be irregular or suppressed, this symptom, however, of no great importance. Seymour states that when both ovaries are affected menstruation is always absent but such does not seem to have been the experience of others. I add to all these symptoms Mr. Baker Brown in his course for 1849 gives the following:

- Emaciation of the neck & shoulders, peculiar expression of countenance. The face being elongated the slightly wrinkled with a deep, sad expression. This is the time the man most needs medical help. The lips are thinner. The mouth loses its curves. The angles of the mouth are also drawn down. The eyes are remarkably defined, thin over the bridge of the nose, the cheekbones hollow, the hair is thin & pale.
Diagnoses

Our diagnosis must, in order to be accurate, be founded on a careful consideration of certain of the symptoms the following of which are the principal:

1. History of the case. If the patient tells you that she felt certain of the symptoms characteristic of the first stage of the disease that she then observed a tumour on one or other side, which has been, since that time, gradually enlarging, this will direct your attention to the ovary.

2. Feeling the tumour whether circumscribed or not circumscribed, if the abdominal wall will move or less perceptible fluctuation will -

3. There may be dropy of the lep or from pressure on the bladder, or if the tumour is large, oppression, vomiting, palpitation, pain pressure on the diaphragm organs in the neighbourhood.

But having spoken of these general aids to a true diagnosis, I so on to speak very shortly of the modes of distinguishing it from other diseases.
whilst it is yet in the pelvis it may be
distinguish from:

(1) Droopy of the Fallopian tube, by a careful
per vaginam and per rectum, by the symptoms being
more marked

(2) Retraction of the Uterus. By careful
examination but chiefly by means of the uterine
sound

(3) Early pregnancy. Again by means of a
careful examination—per rectum, per vagina
The stoppage of the Calamity may also be sure
to a certain, but limited extent; the diagnosis is
difficult if pregnancy + ovarian droopy oversee

(4) Tumours between the rectum & vagina
In such cases, we arrive at a correct diagnosis,
chiefly by considering the amount of mobility
of the tumour + its degree of fluctuation

After access into the abdomen it has to
be distinguished from:

(1) Tended bladder by means of the Catheter
(2) Ascites. By the depressed form of the tumour
By the fact that the fluid in ovarian droopy
does not change its position with that of the
patient or at least only to a slight extent.
The fluctuation is usually more distinct in
ascites. By percussion a dull sound is yielded
by the ovarian tumour a very portion of
the patient whilst a vesicles there is usually
at the highest part a clear lymphatic fluid
owing to the fact that the intestines float on
the surface of the fluid, this is of great importance.
Dr. Bennett has also proposed as an additional
test a microscopic examination of part of
the fluid for he states that in the fluid of
ovarian hyperplasia flocculi exist which are
composed of numerous epithelial cells
varying in size from 1/40 to 1/500 of a millimetre
these cells being derived from the internal
membrane of the cyst. This might be
useful if by means of an exploring needle we
could get some of these flocculi without danger
to the patient.

(3) Pregnancy, chiefly by means of ascultation.

Of course if the tumour possesses any large
arteries or vae of it is pressed against a large
artery a sound like this placental souffle will
be heard. Also if the diagnosis is to be made
before the time that ascultation can be used.

Ballottment, Ascola bound the nipples of
Careful examination may lead us to a correct
diagnosis.

4) False uterine pregnancy. By the history of the case careful

uterine internal examination especially the stethoscope.
5 Uterine Tumours. By their greater density by their central position, Blindell lays great stress on the importance of remembering the lateral position of the diseased ovary. This however is after all only of secondary importance. The great means of diagnosis is the uterine sound; the uterine tumour is felt to move about with the uterus not to the diseased ovary.

6 Malignant disease of the Ovary. According to Dr. Blindell and Dr. Churchill by the mild character of the symptoms the more rapid growth of Ovarian Tumour. Dr. Blindell says "Rapid growth when it occurs is an excellent diagnostic, for the slow growth is no certain proof of a suspected accumulation.

We may be almost certain that the ovary is enlarged from droopy, serino-droopy or at all events for an suspected accumulation of one kind or another if the growth have taken place in the course of a few months. This seems rather remarkable for as a general rule malignant diseases run their course and fatally in a very short time. They however allow that the symptoms are of a more urgent character a malignant disease. The growth of the tumour, after entering the
abdomen will undoubtedly be more rapid in ovarian droopy, but I think that its growth whilst in the pelvis will probably be slower - in addition to this somewhat doubtful distinguishing characteristic we have others, the patient will probably have a cachectic appearance & if all likelihood she will have malignant disease elsewhere. Then unless there is droopy combined with the malignant tumour there will be no fluctuation felt.

7. Enlargement of other organs as the liver spleen etc. There is in these cases usually more or less ascites. Seymour says he has seen three mistakes arise from this cause in one year. They are to be distinguished chiefly by the history of the case & the symptoms.

8. Floating kidneys. This difficulty will be met with but seldom. The distinction must be made by the same means as those used in the last case.

9. Fecal accumulation in the colon. Distinguished by the fact that the fecal mass is not elastic under pressure.

10. Phantom tumour. By the fact that a phantom tumour there is a somewhat
tympanic sound on percussion, but the
most important means of distinction is by the inhalation
of chloroform when the Phantom tumour
collapses & disappears.
11. Abscess of the ovary by the absence of
Inflammatory symptoms & slower growth of
ovarian dropsy.
12. Bilious & Boas abscess. By the absence
of inflammatory symptoms of pain or pressure
for the history of the case.
13. Cystic Tumours growing for various
sites in the abdomen. Their diagnosis
is very difficult. Attention must be paid to
the history of the duration at which the
Tumour was first observed.
14. Mr. Gravens relates a case in which
Retention of the menstrual fluid for
imperforate hymen was mistaken for ovarian
dropsy. The distinction here must be very
easy, the fact a Corset-diagnosis can
severely fail like arrived at, for
on making a vaginal examination the
true state of the case would be found.
Treatment

This is a very important part of the subject treated of in this essay, one which has of late years received a great deal of attention from many of the most distinguished members of the profession. Very many different modes of treatment have been adopted, but this is but natural in a disease which, if it is allowed to run its natural course, is almost inevitably fatal. It is true that it may not prove fatal, or even produce very severe symptoms for years, but still during the latter part of its course, the patient will suffer greatly and ultimately perish miserably, becoming worn out by the pain, diarrhea, vomiting, and other symptoms already mentioned. These symptoms, as I said before, are chiefly owing to the pressure of the diseased bowels on various neighbouring organs; then in addition there is the drain, stated upon the system by the separation of the serum from the blood.

The treatment may be considered under
two heads 1) Palliative 2) Radical

Then the palliative treatment may be subdivided into (a) Medical and (b) Surgical. There are however many methods of treatment which are intended to produce a radical cure, though in many instances do so, but the only

mode of treatment which I shall consider under this second head is ovariotomy.

I shall now merely mention the different methods of treatment which have been proposed and afterwards, in conclusion, proceed to consider the more important of these especially with regard to ovariotomy.

I Palliative Treatment

Medical

1) The first mode of palliative treatment which I shall consider is by the internal administration of various medicines which are known to be of use in idiopathic + other accumulations elsewhere.

These are:

(a) Diuretics + drastic purgatives. It is more than doubtful whether these remedies have any effect on the fluid of ovarian dropsy, they certainly may appear to produce absoption, where ascites is
combined with ovarian dropsy, for undoubtedly they rapidly remove ascitic effusions
(Supinum of Pyrola Umbellata is recommended by Seymour in the dose of a pint daily)
these remedies might be tried whilst the tumor is yet small, great care however
being taken never to push them to such an extent as to affect the health of the
patient.

1) Mercury, Iodide of Potassium, Liqueur Potassae, Chloride of Lime to have all
been supposed to promote absorption in ovarian
dropsy. — The efficacy of all many, of
these is somewhat doubtful; mercury especially
ought to be used very seldom if at all
as it may do great harm to the patient
by impairing her health.

2) Emetics these have been recommended by
Dr. Peveril of Manchester.

3) Blood letting. This says Seymour is only
recommended. “If it is obvious that inflammatory
action is going on within the cyst, it will probably
spread to the neighbouring peritoneum. —
in such cases the lancet may be used
with much effect.” Blood letting even in
these circumstances would only be applicable
in the case of plethoric patients, at such all
not likely to be at all frequently met with labouring under this disease, besides blood letting should never be used unless other milder means are likely to fail.

(C) Friction combined or not with mercurial uncinum has been recommended that apparently been partially successful, as in a case recorded by Dr. C. M. Clarke, but even in this case the fluid appears to have reaccumulated.

(f) Sir Stocke in the Lancet for 1858 vol n. 419 relates a case which was successfully treated by means of the following lotion by

\[
\begin{align*}
\text{Potassii Iodidi} & : 3t \\
\text{Potassii Bromidi} & : 3 \text{ III}
\end{align*}
\]

\[
\text{Acqua Ost} \text{ it Loto:}
\]

This was directed to be applied on spongio - pelvis; he states that the humor was much reduced in 12 months and that the patients' general health was much improved.

(g) Pousson and electricity have been advocated by some, but they are apparently quite useless.

(h) Iron has used repeated local blood letting or leeches, blisters, fomentations, laxative medicines and inhaled the heat was much pain. He also uses friction with mercurial
Ointment, coloel Tararized iron, or burnt sponges (undoubtedly on account of the iodine which it contains) given for a considerable time in small doses: a plaster composed of gum ammoniacum dissolved in alcohol. E_by or lastly, from electricity. Alluding to the results derived from the use of this extensive list of remedies he says from all or some of these means, I have frequently had occasion to believe some present advantage was obtained or mischief prevented, but when the disease has made a certain progress the method of treatment has hitherto been discovered sufficiently efficacious to remove it, or prevent its increase."

Dr. Burns speaking of these remedies says they only produce an effect when dropsical effusion is combined with the disease that they act more powerfully after paracentesis. He concludes thus: "With regard to their power or the power of any other medicine in reducing the size of the ovary, my opinion is that they have no more effect in influence than they have over a malicious tumour of the sholder or over the disease as it occurs in the testicle, or over the configuration of the patients nose."
Mr. Hamilton thought that he had seen cure from pressure on the abdomen, performing the warm bath, a protracted course of murate of lime together with the ordinary means for keeping up the general health. Dr. Churchill thinks that these remedies can only be of use whilst the tumour is still in the pelvis; the reason of this is not very obvious, the disease may however appear to be extended by them especially to those who place confidence in them, for in this stage the disease is in many cases very slowly developed, hence they may infer that the delay of development is owing to the treatment employed.

In the Lancet for 1853 a case is recorded by W. Irwin, Esq. in which the patient with syrup of iodide of mercuric (20 drops three times a day) also a mixture of perr sulphate of iodine was applied over the tumour. He states that under this treatment the tumour steadily decreased in size, the patient was gaining strength, when she got cold, was seized with shivering, high fever, profuse perspiration, which lasted for three days, when she was...
left, was but free from the tumour. He adds that multicellular ovarian disease was diagnosed by Dr. Simpson & Mr. Bell.

Now there are several points in this history which, I think, point rather to the conclusion that this was a case of spontaneous cure by rupture of the cyst 

escape of its contents into the peritoneum 

than a cure due to the medical means employed.

1) There was steady decrease after the administration of the medicine, so far this is favourable to the theory of the medical cure, but this diminution in size might be more apparent than real from absorption of any ascitic fluid which might be present.

2) The rapid disappearance of the tumour after the rigor & constitutional symptoms

3) These symptoms themselves. From this & other cases it therefore appears doubtful whether medicine can do much in the way of cure, or retardation of the course of this disease, but undeniably it can do a great in another, very important way. In the relief of urgent symptoms & in keeping up the health of the
patient, this is of great importance for
the disease undoubtedly progresses much
more rapidly when the patient’s general
health is bad.

Although it is doubtful whether any
medical treatment is of direct use in
ovarian dropsey, it is our duty to give our
patients the benefit of that doubt.

Probably the best medicines would be mild
drenches & syrup of pilocarpine of iron, care
being always taken never to injure the
general health in their administration,
but indeed primarily to attend to this,
not make the direct action on the tumour
itself by whatever medicines we employ
subordinate to such constitutional treatment.

--- Palliative Surgical Treatment ---

This may or may not be combined with
medical treatment. The principal
surgical means of treatment is tapping
Catheterism of the Fallopian tubes has
also been recommended. There are one or
two means for obtaining most permanent relief
which I shall hereafter consider.
1. Cystoclepsy of the Fallopian tube

This was proposed by Dr. Cartwright and Dr. W. Stone of New Orleans in a case in which it was used as recorded by them in the Boston Medical and Surgical Journal for May 1857. They state that on passing the catheter for some distance, three inches or so, they found that the Fallopian tube was dilated; the fluid was then drawn off; the patient was relieved, there being but slight fulness of the hypogastric region remaining, the general health was good. In the Dallas Argus for October the 12th, 1857, Dr. J. Robinson records two cases of spontaneous cure of ovarian droopy by discharge of the fluid through the Fallopian tube. In one of these a post-mortem examination was made; three cysts were found in addition to the one which had last ruptured (the same phenomenon having occurred in the patient before) one of these was unruptured and about the size of an orange.

This mode of treatment has not apparently met with much favour at least in this country and I think there are several objections to it:  

1) The narrowness of the Fallopian tube
the consequent difficulty of passing a catheter – 
1. The small size of the catheter which must necessarily be used for it is obvious that if the contents of the cyst or cysts are even slightly xerostomous, the aperture of the catheter will be too small to admit of their passage – 
2. The absence of proof of the safety of the operation for certainty if it is not very considerably safer than tapping it should never be used – 

I now pass on to consider a much more important palliative resource viz. tapping. This when combined with various modes of after treatment, pressure injections, approaches more nearly a radical cure than any other palliative measure in fact in many cases cure have undoubtedly been obtained.

Before considering the means proposed as aids to tapping I shall briefly consider the operation itself.

Paracentesis

In most cases this operation or some other is required, sooner or later, in order to prolong
life to relieve the distressing symptoms already mentioned, which arise when the tumour attains a large size. Physicians surgeons of both ancient and modern times have greatly feared the first operation; hence it is frequently delayed till a very advanced period of the disease. Morgagni thus contemplated were decidedly opposed to the operation. Dr. Mead also as appears from some of his cases greatly feared it (Seymour). The operation of tapping for the first time must indeed by no means be made light of, for it is a really a very grave proceeding.

Most authors seem to agree that it is fatal in about 1 in 5. Dr. Simpson adduces 20 cases of whom 4 died. True records 46 cases of whom 37 died. 10 of these died within a week. In other words, I presume from the effects of the operation Dr. Churchill says one a five die that paracentesis does not prolong life beyond 18 months + 19 days.

Dr. John Smith in a paper read before the Obstetrical Society of London (Cancer, 1861) says of 130 patients who has the
operation performed on them 69 or about 7 out of 13 died within a year; altogether 114 were known to have died — thus there were only 16 cases of possible cure or 1 in 8.

Then from the way in which the statement is made it is probable that the result in at least some of the 16 cases was unknown, so we may safely infer that the proportion of permanent cures obtained by tapping is even much less than 1 in 8 — from these statistics then it appears —

1) That we must not expect to obtain a cure by means of tapping.

2) That the risk arising from the operation, especially for its first performance is by no means slight — from the above statistics it would probably appear to be fatal in not less than 1 in 5 or this moreover appears to be the opinion of most authors —

3) That the reaccumulation of fluid is very rapid, hence the patient seldom lives very long even after she escapes the immediate risks of the operation.

Dr. Blundell is speaking of the treatment of ovarian dropsy by means of tapping says — even in cases the most favourable tapping
exposes the patient to inflammation, adhering suppuration, phthisis, excretions, and death.
There are no doubt remarkable exceptions to this rule, where the patient has lived to a very advanced age as is seen for instance in the case of Sarah Hoppus, related by Mr. Martinacu - this woman was tapped no fewer than 80 times in 27 years. The three last tapping 6631 pints of fluid were removed. Now before operating it is evidently our duty to tell the patient the risk, the nature of the relief to be derived from the operation.
The usual result of tapping being so unfavourable we are led to ask the question is there any medical or surgical treatment for which combined with, or used after tapping we may hope to obtain a radical cure?

The answer to this question is doubtful. The principal methods have however been proposed (1) injection of saline into the cyst, (2) Continued use of passage after tapping (3) leaving in a Canal or Bougie.
Injection of Iodine after Tapping

This treatment appears to have been suggested by its great success in hydrocele. It was first employed in France, afterward to a considerable extent in this city, but it appears to have been some time before it was introduced into practice in England. It has been used in a great number of cases, & apparently without greatly increasing the mortality of the simple operation of tapping. Dr. Taylor Smith in a paper already alluded to (page 28), states that of 138 cases treated in this way 66 died or relapsed & 64 were said to be cured. If this table is substantially correct we must look upon the injection of Iodine as a mode of treatment, worthy of serious consideration; but probably the number of cases obtained is not nearly so great as that thus represented. Dr. Simpson who has used it in many cases gives as the result of his experience that the first two cases in which he used it, it was perfectly successful, but in other cases it has usually returned owing to the enlargement of the other cysts.
He also states that he has only seen one death result from its use.

From the above statement it would appear that this treatment would be very successful if used only in cases of unilocular dropy; but that in cases of the multilocular variety it is of little avail; this is only what we should expect, for in very few cases of the multilocular kind do the various cysto communicate freely with each other.

It therefore, I think, seems clear that this method of treatment should at least be tried in cases of unilocular ovarian dropy; but that its use in these multilocular for most common variety, is doubtful.

This treatment is, I think now but little employed, at least, in British practice.

--- Tapping Combined with Pressure ---

This method of treatment is advocated by various practitioners but more especially by Mr. Baker Brown; it was, I believe, first suggested by that gentleman in 1844.
He at first advocated its use very strongly, but apparently his faith in it has somewhat declined of late years. He considers it most applicable to the treatment "Of unilocular cysts, without adhesions, with clear albuminous contents, where there is the condition of the patient admit of its persevering application." He also thinks that there are cases of multilocular disease, tottering when adhesions exist, in which pressure may do good, retard their growth.

He candidly admits that the result of some cases, in which he expected to obtain a radical cure have disappointed him, but adds, that even in such great benefit was derived from the plan, the patient regained health and comfort and the disease was for a time suspended. It seems quite clear that this aid to tapping should be used in all cases in which procrastination is practised, provided it causes no great inconvenience to the patient. The great objection to it is that it is likely to produce such adhesions as to render subsequent want to overrotomy impracticable — Mr. Beau
however distinctly states that such is certainly not the result of his experience.

By leaving a cannula in the wound -

This is a very old procedure & was successful under unfavorable circumstances, in the hands of Dr. Houston above a century ago. Mr. Dean also treated two cases in this way, only instead of a cannula he used washing, an astrințin, injected mild washes of barley water and a little honey. In one of these the fistulous aperture never closed the patient died in four years. In the other the fistulous aperture closed in two years & the patient completely recovered. It has also been proposed to make a fistulous opening by means of sterile oil as Castor Oil, Chloride of Zine paste &c. This mode of operating was employed by Chippard & Beall. Some have recommended that a fistulous opening should be made near the top of the tumor, so as merely to allow of the overflow of the excess of fluids & still always keep the cyst full. From later experience, it appears that these modes of treatment
are not usually followed by a very successful result, hence they are now almost-abandoned. There is however an operation which may be considered as a modification of them, which I shall now go on shortly to consider. The operation is.

The Production of Adhesions on a Fistulous Opening

This operation was proposed by Mr. Bambidge of Liverpool. He made the fistulous opening in the middle line but Mr. Baxter Brown recommends a lateral position.

In performing this operation Mr. Bambidge made an incision in the middle line, extending from the umbilicus to opposite the anterior superior iliac spine or process of the ilium. He then carefully dissected down to the peritoneum, evacuated the fluid by tapping the peritoneum which reflects the back and the upper aponeurotic border of the external oblique, on each side of the wound, lastly he divided the cut between the double row of sutures kept the incision free healing by the first intention by interposing pledge of lint between its lips.
Looking at the mortality arising from this mode of treatment, the results do not appear by any means encouraging; as, of the two cases in which Mr. Bonnycastle operated one died within four years—all the three patients on whom Mr. Brown operated died from this, I think, it is evident that the operation is very rarely, if ever, justifiable except in cases where there are adhesions of great extent this operation should give place to ophractomy, for after all the cases under the most favourable circumstances must be slow tedious. Again, it has been proposed to make the fistulous opening from the vagina or rectum. In cases when nothing else can be done this treatment may be justifiable, but such cases will rarely be met with, I think there is no doubt that the fistulous opening should be made from the vagina in preference to the rectum where practicable. This operation should certainly, if possible, be avoided, for it must interfere very greatly with the comfort of the patient: approaching indeed to the inconvenience arising from acute vaginal fistula, for in some cases the fluid in ovarian disease is very fatal.
It has been supposed that nature sometimes effects a radical cure by opening the cyst into the bowel & thus evacuating its contents.
It is however very problematical whether a cure in the true sense of the word is obtained, or whether it does not just correspond to the relief derived from ordinary tapping.
I shall now consider another means which has been proposed for obtaining a radical cure, before going on to consider the important subject of Drainage; this is

By removal of a Portion of the Cyst—

This operation was first proposed and practiced by Mr. Jefferson, West—Hargrave. It has since been performed by many surgeons including Mr. B. Bown & Mr. Wilco. There are two methods of operating recommended.
1) By making a small incision of about an inch in length, thro' the abdominal wall, seizing the cyst & evacuating its contents; then stitching as large a portion of it as could be drawn thro' the wound.
In speaking of this method Dr. Baker Brown says, "It will be seen that this operation is only applicable to simple cases, that the smallness of the opening precludes the possibility of ascertaining during the operation either the vascularity of the cyst or the extent of its adhesions."

2) He recommends a larger incision of two or three inches in length, for he says that this does not add materially to the danger of the operation, moreover, that it allows of the tying of any vessels which may require it. "It appears," says the same author, "that the excision of a portion of the cyst is more free from danger than ovariotomy; less tedious than the formation of an artificial evisceration. But it has only a limited application."

From this I think, it appears that we should rarely resort to this operation the object of which is to allow the fluid as it is secreted to pass into the cavity of the peritoneum; there become absorbed; for if the fluid is of a purulent or unhealthy character it may produce such an amount of irritation as to give rise to fatal peritonitis. It, however, appears to me that it would be very useful in those cases of ovarian abscess in which..."
The operation of ovariotomy has failed from the great extent of the adhesions; for surely if the operation of gastrotomy has been performed, it would be better to give the patient a chance of cure, or, at any rate, of permanent palliation in this way, than merely to close up the wound, thus having exposed the patient to very considerable risk without any beneficial result.

I now pass on to consider the last, I think, I may venture to say, most important of all the methods of treatment of ovarian dropsy, for it is by it alone that we can confidently expect to obtain a radical cure. The operation to which I allude I need scarcely say is

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Ovariotomy

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**History.**

The origin of the operation does not seem to be very well established, for different authors refer its origin to different sources. Mr. B. Brown says the idea of separation of the whole diseased mass occurred to several of the older surgeons as Bouletus, Dela Porte, van der Haar, &c. but was opposed by Sebalieus, Morgagni, & others, indeed.
Morgagni went so far as to say that the operation is impossible - Mr. Childs and Mr. B. Bannister state that Annonio of Rome was the first to perform the operation, that it was successful; this was in 1782. On the other hand, J. W. Simpson, Tyler Smith, and others state that it was first performed by an American surgeon, Dr. McDowell, of Kentucky, in 1809. At first, the operation was much condemned by many surgeons. Certainly the statistics at that time do not appear to have been very favourable. Dr. Lyman was about the first to perform it in this country but he had not much success. - Scotland Hamilton, others were very much opposed to it, but at the present time the opinion of most of the leading members of the profession appears to be more or less in favour, or at any rate changing in regard to it. It shall be my object to prove as well as I can, from statistics, that such a change of opinion is not unfounded, but that the grounds for it are very sufficient and reasonable. Their statistics are, of course, necessarily, very imperfect. I have already been published in various works, but as for
as I knew they have never been drawn up in one extended table; hence I hope that they may not be looked upon as a mere bare accumulation of previously well known facts. I may here state that these statistics are taken quite irrespective of the opinions, which the authors who record them, have or had with regard to the propriety of the operation. I propose first of all to give them all together in one extended table, then to select from that table those which are recorded by various practitioners as the result of their own experience; afterward I shall attempt to draw such inferences from these as they may appear to me to justify. I think it better to proceed with this consideration before describing the operation, the improvement which of late it has undergone—
<table>
<thead>
<tr>
<th>By whom recorded</th>
<th>No. of cases</th>
<th>No. of deaths</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Phillips</td>
<td>61</td>
<td>26</td>
<td>1 in 2 1/3</td>
</tr>
<tr>
<td>Mr. S Lee</td>
<td>90</td>
<td>33</td>
<td>1 in 2 3/4</td>
</tr>
<tr>
<td>Dr. H Lee</td>
<td>102</td>
<td>42</td>
<td>1 in 2 3/4</td>
</tr>
<tr>
<td>Dr. Corrigan (moral)</td>
<td>65</td>
<td>25</td>
<td>1 in 2 3/4</td>
</tr>
<tr>
<td>Mr. T. Barnet</td>
<td>8</td>
<td>2</td>
<td>1 in 4</td>
</tr>
<tr>
<td>Dr. Mr. Lee (known cases)</td>
<td>36</td>
<td>12</td>
<td>1 in 3</td>
</tr>
<tr>
<td>— (records)</td>
<td>161</td>
<td>47</td>
<td>1 in 3 3/4</td>
</tr>
<tr>
<td>Dr. J. Bird</td>
<td>13</td>
<td>4</td>
<td>1 in 3 1/4</td>
</tr>
<tr>
<td>Reported in Bradford</td>
<td>21</td>
<td>17</td>
<td>1 in 3</td>
</tr>
<tr>
<td>Dr. J. Clay</td>
<td>425</td>
<td>183</td>
<td>1 in 2 1/3</td>
</tr>
<tr>
<td>Mr. Eberle</td>
<td>395</td>
<td>183</td>
<td>1 in 2 1/6</td>
</tr>
</tbody>
</table>

| In Great Britain         | 222          | 95            | 1 in 2 1/3  |
| Germany                  | 51           | 38            | 3 deaths in 4 |
| America                  | 113          | 49            | 1 in 2 1/3  |
| Unknown                  | 9            | 1             | 1 in 9 1/11  |

| Performed in Ohio        | 24           | 13            | 1 in 2      |
| Dr. Forr                   | 200          | 80            | 1 in 2 1/2  |
| Dr. Clay                  | 107          | 34            | 1 in 3 4/1  |
| Mr. S. Wells              | 74           | 25            | 1 in 3      |
| Mr. Baker                 | 58           | 26            | 1 in 2 1/2  |
| Collected from London     | 50           | 17            | 1 in 3      |

**Total**                  | **1890**     | **759**       | **1 in 2 1/2** |

Dr. Tyler Smith (probably the same, corrected by G.T. Erichsen) 345 183 1 in 2 1/6
From this table it appears that there were in the 1889 cases there recorded 759 deaths and 1130 recoveries, or in other words two deaths in every five cases, or 40 per cent. This mortality is undoubtedly very great, and I think probably considerably greater than it ought to be. To prove this I shall now select a number of cases, where coarctation has been performed by various Bullet practitioners; hence, I think, these statistics deserve to be looked upon as more reliable than the cases gathered from various sources by the different authors who have recorded them.

--- Selected Table ---

<table>
<thead>
<tr>
<th>Name of Operator</th>
<th>No of cases</th>
<th>No of deaths</th>
<th>Proportion</th>
</tr>
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<tbody>
<tr>
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<td>107</td>
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<td>Mr. Baker Brown</td>
<td>58</td>
<td>26</td>
<td>1 - 2 1/4</td>
</tr>
<tr>
<td>Mr. A. B. Barnes</td>
<td>8</td>
<td>2</td>
<td>1 - 4</td>
</tr>
<tr>
<td>F. Atlee (American)</td>
<td>36</td>
<td>12</td>
<td>1 - 3</td>
</tr>
<tr>
<td>Dr. F. Bird</td>
<td>13</td>
<td>4</td>
<td>1 - 3 1/4</td>
</tr>
<tr>
<td>Dr. Tyler Swett</td>
<td>8</td>
<td>1</td>
<td>1 - 8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>304</strong></td>
<td><strong>104</strong></td>
<td><strong>1 - 3</strong></td>
</tr>
</tbody>
</table>
It may be argued that even according to this latter table the mortality is very great—but certainly such is the case; but if we considering the merits of this operation, we always keep in mind that it is in reality the only operation which is not merely palliative, I think such statistics will assume a very different aspect, and claim to be looked upon with much more favour than if such was not the case.

Then as regards the cases I have collected from the literature, in all 53, there were 17 deaths; for the operation, 13 from complications independent of the operation, there were brownian, destruction of the Bunches Mucous Surface, pleurisy. (In collecting these cases I carefully avoided including any which were recorded by Bevan Clay Wells in the 8 cases of Dr. I. Smith are however included). From these cases it also appears that the proportion of deaths is about 1 in 3.

If we consider the number of deaths as 17 and include the 3 fatal cases arising from the Causes already mentioned, the proportion is 1 in 3.74. If, on the other hand, we exclude these three amongst the deaths, the proportion is reduced.
Again excluding these three cases altogether for the statistics, which is I think the best-fairest method of disposing of them, it is 11 in 24/27 or 11/3.

Dr. Lee, who has always been one of the bitterest enemies of the operation writing in the Cyclopaedia of Practical Medicine, on this subject says—

"On the practice of the aspiration of the ovaria, when diseased, it is not necessary to offer any observation, as it has been abandoned by all who have made themselves acquainted with the pathology of these organs."—

This statement certainly does not hold good at the present time as the operation is by no means given up as the medical journals and individual experience of such men as Clay Wells, Brown, can testify.

Now Dr. Lee's statistics the undoubtedly brought together with great care trouble would seem to place the standard of mortality too high, for of 102 patients in whom the ovary was removed, he says 42 died or 1 in 2.37. But even admitting this
to be the true proportion of deaths, I do not think that it follows that the operation ought to be abandoned: for be it remembered that lapping, which practically may be regarded as the only alternative, is fatal in one in five: indeed according to the records of our statistics of 46 patients who were tapped 10 died within a week; how great is the difference of the benefit derived from lapping from ovariotomy!

As I said before many practitioners who were formerly much opposed to the operation now consider it justifiable at least in certain cases. As proof of this I may mention the case of one gentleman, who has, however, apparently changed his opinion more rapidly than the majority of its opponents: the gentleman I allude to is Dr. Matthews Duncan. In the Lancet for 1854 he stated that the operation of ovariotomy, is either condemned unconditionally, or, by other surgeons, it is hampered with such conditions that practically it is of no use. Now although this was his opinion little more than six years ago, he has performed it this year but unfortunately
wit a fatal result: I believe he was also contemplating its use in another case which however terminated fatally before the operation could be had recourse to. Now I think that the mere fact of men changing their opinion so rapidly with regard to the propriety of the operation, is no mean argument in its favour; for surely a man who has held out so long against the operation will not allow his prejudices to be overthrown without very weighty reasons.

Dr. Duncan, apparently, as a sort of apology for his sweeping denunciation of the operation of ovariotomy, stated that tapping is by no means a dangerous one. He seems to think that the mere fact that a woman may be tapped 20, 30, or more times, without death resulting, is a sufficient guarantee of the soundness of this opinion. This reasoning, although at first sight plausible, is very fallacious for it is the fact that subsequent tapping which are so dangerous, which have always been so much dreaded by many practitioners. From all this I think it is tolerably clear that the operation is, or
very shortly will be looked upon, almost universally, not only as a justifiable, but in reality a very good one in certain cases, that is to say, when there are no such obstacles to the removal, as adherences of great extent, organic disease of other organs, or great weakness of the patient — we do not attempt the operation for extirpation of the ovary till the disease has advanced to such an extent as to cause great inconvenience to the patient, producing from its size various symptoms, already mentioned, from the pressure it exerts on various organs.

But we now come to consider the very important point —

Should we perform ovariotomy in the first instance or should we first try tapping?

This question is undoubtedly one of the very greatest importance one which it is very difficult, satisfactorily, to answer. It is a very grave matter to tap a patient labouring under this disease, with but little hope of obtaining a cure, with the determination to resort to ovariotomy at a subsequent
period, if such a proceeding is refused; for
by so doing we expose her to a double risk
or at any rate to a very considerable
increase of risk. The result of tapping
when combined with pressure is very
unsatisfactory, otherwise we ought to have
no hesitation in first trying it: if
something was hit upon, from which
combined with tapping we might hope,
with considerable confidence, for a favourable
result, it would undoubtedly be our duty
to give it a trial—
It appears to me that the operation of
Drainotomy should not be merely used
as a sort of "derrière rescousse" as is
too frequently the case, but that it
should be used in the first instance
in a great majority of cases of
Multilocular Ovarian dropsy where there
is no especial contraindication.
I think, however, that we ought to leave
the decision of this important matter in
great part to the patient and her friends
fairly representing to her the nature of the relief
afforded by the two operations, and their
relative risks.
Again there need be no compromise so far
at the removal on the ground that the organ is an important one, for its function must inevitably have been destroyed before the disease has advanced to any considerable extent. Moreover, there are a great number of cases on record in which pregnancy followed removal of the ovary.

I shall now pass on to the consideration of the method of operating; afterwards give a short general summary of the treatment, endeavouring to select therefrom those methods which seem to deserve most confidence and to promise the best results.

The Operation

Under this heading I propose not only to consider the operation itself, but also the circumstances which contra-indicate its performance, the manner in which the patient ought to be prepared for it, so that she may be subjected to the least possible risk.
Contraindications to its performance

1. Undoubtedly the great contraindication to its use is the presence of adhesions to neighbouring parts. In making the diagnosis the extent of adhesions should be determined with as great accuracy as possible; for certainly the operation should never be undertaken when the adhesions are so great as to render the removal very difficult and dangerous, or altogether impossible; the reason of this is that one of the great dangers arising from the operation is simply the opening into the peritoneal cavity, and the consequent risk of Peritonitis. Hence the necessity for never commencing the operation rashly without a very careful examination. In cases where there is any doubt it would probably be advisable to make an exploratory incision to allow of the introduction of the finger to determine the extent and nature of the adhesions. Adhesions of a more limited extent are not now looked upon as so unfavourable to the operation, as they formerly were, for indeed they do not seem to add materially to the danger.
2) Great care must be taken in arriving at a correct diagnosis, for in a great number of cases where the operation was contemplated it has been found on opening into the abdomen that there was no ovarian disease of any kind. This is a most unfortunate mistake and the only means of remedy after discovering it is carefully to bring the wound together and promote healing by the first intention by every available means.

3. The operation should not be undertaken where the disease is combined with malignant disease or even if we have commenced the operation it is doubtful whether we ought to complete it. The reason of this, of course, is the difficulty of thoroughly removing the whole of the diseased parts.

4. The operation should not be performed unless the strength of the patient is such as to give good reason to hope, that she will be able to bear up against the various dangers to which she will be exposed.

5. Mr. Baker Brown states that he believes a highly albuminous fluid is a decided contra-indication. The reason for this belief being that the drain upon the system produced by the abstraction of this fluid from the
blood is great, in fact that it has just the same effect as the abstraction of albumen in disease of the kidney. I must confess that I cannot see why this should be made a special contraindication, for the quantity of albumen abstracted from the blood must be very much less than an albuminuria. Moreover if it has greatly weakened the patient the operation will be contraindicated by that weakness. Again the cases are quite different for in performing ovariotomy we remove the source of the drain, for of course in removing the ovary we put a permanent stop to the drain on the system produced by the abstraction of the Albumen from the blood. Whereas in performing operations on patients laboured under albuminuria such is not the case.

6. Organic disease of the lungs, kidneys, heart, liver organs will most likely contraindicate the operation but this will to a great measure be due to the debility which they produce.

7. Slow growth & absence of urgent symptoms - we should not be inclined to perform the operation whilst the patient is able to follow her usual occupations.
domestic duties, where the symptoms are not very urgent: still I fully believe that if the operation was performed in such persons at such a period of the disease the statistics would be much more favourable than they are at present: still I do not think this would justify the use of the operation at this stage of the disease the real fact to be looked to is this - is the greater chance of recovery from the operation such as to counter-balance the chance of a life, at least, comparatively comfortable being shortened by some months?

If this question cannot be answered in the affirmative then most certainly the operation should never be performed under these circumstances.

--- Preparation of the Patient for the operation ---

The patient should have a warm bath the night before the operation. In the morning a mild purgative such as castor oil or glycerine should be administered. The patient should have little or no food for some hours before the operation so as to avoid as much as possible any sickness vomiting.
which might otherwise be produced by
the chloroform - warm clothes, hot water
bottles & other remedies should be ready in
case there is any danger of death being threatened by collapse
Then formerly the room was heated to a
temperature of 70° or 80°F but now this
is not so much attended to, however the
room should be kept pretty warm. A
Kettle of boiling water should be introduced
into it, in order to render the atmosphere
moist - Such are some of the most
important matters to be attended to, although
I have condensed them in very few words, yet
I may state that far from considering them
as unimportant, I fully believe believe them
to be of very great importance, & very materially
to influence the result of the operation -

— The operation of extirpation —

Formerly there were two operations advocated,
major & minor, in the former a large
incision, extending from the sternum to the
pubes, was made; in the latter (minor)
a small incision of two or three inches
in length was had recourse to.
Both these modes of operating are now
given up, the incision always being made in proportion to the size of the tumour. On the one hand, we ought to avoid making an incision unnecessarily large, on the other, it is no use making it too small to allow of the easy removal of the ovary. After it has been stripped of its fluid - indeed it is now pretty generally believed that the success of the operation does not so much depend upon the size of the wound as upon its healing by the first intention, in the manner in which the vessels of the pedicle are secured. After the incision has been made, the bowels may be kept in position by means of warm damp flannel - the hands may now be passed round the tumour in search of adhesions; these must, if found, be carefully divided, if possible, by the finger nail, or seen by the handle of the knife, as after cutting them we are liable to have tedious and dangerous hemorrhage, chiefly by oozying from the small vessels. The next step in the operation is the securing of the pedicle - this is the most important part of the operation.
A great variety of means have been suggested for the purpose. Amongst these are the following:

1. Passing a double ligature through the pedicle, the tying one on each side; the ligature and pedicle are afterwards knotted outside.
2. By means of a single ligature of white cord.
3. By the clamp.
4. Lying the pedicle, then cutting off both ends of the ligature, close up to the knot, leaving the whole with in the abdomen.

Dr. Jenner has suggested that the pedicle should be cut by means of the actual cautery so that ligature of the vessels would not be required. His reason for this suggestion is that the operation of speying is so successfully performed on the lower animals in this way by peg gellers; he further states that the operation of ovariotomy was first performed by a peg geller while in a state of intoxication. The poor patient was his wife and she recovered. Dr. Jenner however does not state how the incisions were made or any other particulars.

6. Lying each of the pedicles of the pedicle separately has been proposed.
7. By the substitution of silver wires for
The ordinary organic ligatures—

By a clamp—This was proposed by Dr. Simpson and has been employed by him in a case of ovariotomy with the happiest result—

All these different modes of dealing with the pedicle have had their advocates, and of them have been put into practice—

It has been objected to the clamp, which has perhaps been one of the most generally used, that it puts the parts too much on the stretch, hence gives rise to great inconvenience and danger if suturing or apposition supervenes—

I have no doubt that ultimately the method of securing the pedicle by a clamp will become generally or universally used, if, as there seems every reason to hope, the result in subsequent operations, is as favourable as in the case already mentioned—

The advantages that are derived for compression in this operation of very great if it appears that some of the most important are the following—

1. The occlusion of the arteries is quite as secure as when ligatures or the clamp are used

2. There is no strain made on the parts—
3.- It is much more favorable to primary union of the wound of the abdominal wall. This was very well seen in the case of Dr. Simpson already mentioned, for at the whole of the wound with the exception of a very small space was healed in a couple of days.

4.- It does not necessitate the sloughing off of the portion of pedicle left on the genital side of the ligature—such the being the case we have, I think, great reason for hoping that the statistics of the operation will, in future, be much more favorable than they are at present—after the pedicle has been properly secured we bring the wound carefully together so as to promote, as far as possible, adhesion by the first intention. But before doing this we must see that all bleeding, even the slightest oozing from the surfaces of separated adhesions is stopped. The cut surfaces are next to be brought together with sutures and it is recommended by Mr. Baker Brown Bolton, that some of these should go deep down, not so deep, however, as to pierce the peritoneum, but that a majority should be superficial so as to approximate the omental portion.
of the wound — now it appears to me that it is of great importance that the internal part of the wound should heal by the first intention, as well as the external, for if this primary adhesion only occurs externally the internal portion must heal by granulation in the course of this cicatrization the pus which must necessarily be formed will pass into the peritoneal cavity & thus give rise to considerable tell — the question is does this method of bringing the wounded surfaces together give a good hope of primary union of the internal portion — if not is there any better method? I think that approximation cannot be very certainly secured by this means, that it would be much better to use wire sutures introducing them right through the parietal peritoneum, for by this means approximation could be much more accurately made — but this question very naturally arises — is this safe or is it likely to produce perforation by the irritation caused by the wires? Of course I cannot speak of the matter
from experience, but there does not seem to me to be any great danger in such a proceeding, provided the ligatures are metallic; moreover, they will not require to be long clamped, can at once be removed if symptoms of irritation arise.

Mr. Baillie Brown recommends that a many-tailed flannel bandage should then be applied, comfortably tight, round the abdomen. This being the case, I think some assistance might be derived from a carefully arranged roll of linen, being placed on each side of the wound so as to favour the appropriation of its surface. The wound itself may be covered by some very light, wet, dressing.

**After treatment**

It is better, if the bowels are somewhat conformed for some days after the operation, that Mr. B. Brown states that the bladder should be emptied every half hour by means of the catheter. The room should be kept at about the same temperature as during the operation, but there should always be plenty of fresh air. The diet for the first few days should be strictly antiphlogistic. Opium is recommended.
The gave in a dose of 2 gns. after the operation 10 grains every four hours or so till the pain abated.

If any urgent symptoms arise their cause must be healed.

a. If death is threatened by hemorrhage from the slipping of the ligature or needle by which the pedicle is secured, the wound must at once be opened up and the ligature or needle reapplied.

b. If peritonitis arises it must be treated according to general principles.

The great danger seems to be from Peritonitis. Speaking on this subject Dr. Tyler Smith says 43 per cent die from peritonitis, 17 from collapse, 16 from hemorrhage, thus leaving 23 per cent who die from other causes of the nature of these, however he says nothing.

Mr. A. Brown in addition to these three causes of death mentions another viz. Peritonitis of a low or typhoid type, which appears later than any of the preceding, he says "It is seen when any of the cut tissues put on an unhealthy appearance and probably some morbid excretion get into the blood." This seems to be very much like pyemia if not identical with it.

The danger from shock is not very great.
as it is a great measure avoited by chloroform. which should in all instances be used, for I think that if chloroform was decidedly contra-indicated, the patient could not be a fit subject to undergo the operation of ovariotomy.

In cases, where an opening into the abdomen is found such an amount of adhesions as to forbid any hope of success from excision of the ovary, Dr. Turner proposes that the cyst should be emptied by tapping, the pedicle tied, he thinks that by this means reaccumulation of the fluid might be prevented. Yet that different blood would pass to the ovary to prevent its destruction by gangrene— I think this must be a very hazardous proceeding! I am not aware that it has ever been put into practice— I am disposed to believe that removal of a portion of the cyst would be a more safe & justifiable measure. If of course the fluid would not in this case be prevented.
General consideration of the treatment to be employed in ovarian dropsy—

Having now considered most of the different modes of treatment of ovarian dropsy—a detail I pass on, in conclusion, to consider, very shortly, which of these ought to be adopted—

The consideration may be reduced within very narrow limits; for I think the only methods which require much consideration are tapping + ovariotomy— the others I shall discuss very shortly—

In the early stage of the disease there is I think no doubt that palliative medical measures should be employed in the manner already described with the precautions there laid down—

Dr. Blundell suggested that tapping might be thought of whilst the tumour was yet small + in the pelvis; his reason for this suggestion being that the fluid accumulates very slowly in the first stage, just a account of the smallness of the secreting surface of the cyst, which may be no more than a few square inches, & second, the pressure on the ophryon + bladder. This method of treatment seems to me objectionable on one or two grounds—
1. It would be difficult to carry into effect on account of the viscosity of the fluid contained in the cyst.
2. Only if the cyst, if any, would be expected.
3. It is not at all clear that the accumulation of fluid would be as slow as its accumulation in the first instance, for if it were not that at first the walls of the cyst would not contain a surface of a few square inches or one of one square inch. The removal of the pressure would also favour speedy reaccumulation so that I think probably the cyst or cysts would speedily regain the size that they had attained before tapping — I therefore conclude that this treatment is not justifiable and that tapping must not be had recourse to at this stage of the disease.

But when the tumour has attained a large size, has become a source of great annoyance to the patient, I think the question comes to be whether we are to attempt evacuation by means of tapping combined with a chance or radical cure by means of vagotomy? — I state this as my opinion because I think that there are but few cases in which other means, such as the formation of an artificial conduit or removal of a portion.
of the cyst, is justifiable.
I have already considered the relative merits of tapping or ovariotomy at some length.
I stated as my opinion that the operation of ovariotomy should at once be performed in a great majority of cases of multilocular ovarian droopy, where there are no adhesions where the health of the patient is such as to afford a fair hope of success: for if not the operation of ovariotomy, with a mortality of 1 in 3, preferable to mere palliation, entailing repetition, and ultimately almost certain and speedy death, by means of tapping with a mortality, from the immediate effect of the operation, of 1 in 5! I must again state my hope that, in future, the operation will be found less fatal than heretofore.
Then in addition to the reasons I have already given for not using tapping in the first instance or afterwards ovariotomy, I may state that the patient will probably be weaker at each successive tapping therefore in a less favourable condition for undergoing a more fatal operation like ovariotomy. Such then are the different modes of treatment. Such, I think, are the most
justifiable in this disease; undoubtedly their result is too often not such as we could desire; but still the inexorable force of experience points to the fact that from them alone can we hope for a satisfactory result—nevertheless let us hope that in a day not far distant, some fortunate individual may discover a safer equally efficacious mode of treatment, or so doing be well "indeed be conferring an invaluable good on the fainted heart offending part of our species" (Blundell).
1. 43 tablets 200 mg
2. 51 Ativan
3. 3 mg Valium
4. 37
5. Turbo milk on repeat
6. Matthew
7. 43
8. Smith 118