Notes on Uterine Seroioid Tumours

with some illustrative cases

Seroioid tumours of the uterus, or more correctly speaking, Tumours of the myomata are of great interest not only to the physician engaged in the special study of the diseases peculiar to women, but also to the general practitioners, to whom patients usually in the first instance for the cure of these particular complaints. Many women it is true, especially if they remain unmarried, pass through life the unconscious possessors of a uterine tumour, but on the other hand many others, the majority married, seek advice, being alarmed at the steady increase in the contents of their abdomen, while weak it may be from frequent haemorrhage, or after a married life of varying length, anxious to know why they have ceased to bring forth, or have never been the proud mother of children. It is indeed interesting here to note, that while a large fibroid tumour may, owing to its size cause considerable mental distress for symptoms or physical inconvenience whatever, an unexpected tumour of no great dimensions may be the cause of a haemorrhage, bleeding
the very life of the female & necessitating an important surgical operation for its relief. The mention of these surgical procedures leads one to another point of interest in the region of abdominal surgery, more especially the surgery of pelvic tumors. Some of the greatest modern successes have been chronicled. One can read the records of Keen, Zalt, Thornton & other operators without being proud of the surgical art, of which he personally may be only a mean exponent. Again, the discoveries of Apertol, their application to the pelvic organs, have of late years, especially in connection with uterine fibroids, assumed the proportions of a great question, the merits of which are as yet somewhat unsettled. For these reasons then the study of uterine fibroids ought to commend itself to the general practitioners. The occurrence of some cases in my own practice & those of intimate professional brethren, have induced me to take this subject up at the present time as a fit one for a Thesis.
Pathology

These growths, as the nameimplies, aretrue growths of the subepithelial muscular fibres of the
uterus, and are named according to the
preponderating tissue of which they are composed.
Myoma, myoma fibro- myoma, in
some cases, when the interface between the
fibres are filled with fluid they are named
fibrocytic. When we consider the names
"hard lumps", "cartilaginous", "fibroid," we
see we have in the past ideas prevalent
as to their precise nature, among the old
writers. Barnes in 1851 was one of the
first English observers to demonstrate
satisfactorily, their true nature viz. their
identity in structure with the fibres of the un-
pregnant uterus. As regards their
situation, Bayford divides the uterus into
three zones, proximal, fundal and cervical,
pointing out that these growths are most
frequently found in the first third as
in the second of these divisions. In the body
of the uterus the most frequent site is the
Posterior wall, according to Hart & Barbour
p. 383. The soft fibrous myoma is most
commonly found at the fundus.
The naked eye appearance of these tumours may vary from bright red to dark grey or colour, varying in consistency. The appearance of a typical growth presents the concentric "ball of marbles" appearance around one or more centres. The surrounding capsule being of loose fibrous tissue, this capsule, as Seford points out, being a condensed layer of the muscular wall of the uterus, the growth producing the capsule by displacing the surrounding tissue in every direction, pressing it against the unaffected fibres containing it. The tumour being developed between the layers of the uterine muscles as between the leaves of a book. The distribution of the blood vessels in these tumours is important. A few vessels penetrate the growth itself, although the surrounding tissue is very vascular. I quote Seford on these points which bear so much on the pathology, life, and surgical treatment of these tumours: "I must call attention to another point that governs the extent it limits the growth of the tumour, viz., the number and distribution of its vessels, the vessels entering the tumour representing the minute loops that supply the fasciculus in which it..."
originated, they arise at the point of morbid deposit from the parts constituting the capsule, and there are always several of them. The number of these vessels always remains the same, and the calibre is increased with the hypertrophy of the surrounding tissues, they cannot grow at the demand of the trophic energies of the tumour to an unlimited degree, but their range is limited by the growth of the surrounding parts. As the tumour grows its capsule expands the vessels are separated further from each other until after a while the area becomes so large that the supply of blood will not admit of further growth; the tumour comes to a standstill. Thus there grows the firm nature of their supply as limited, hence the history of these tumours is one of self-limited growth.

The microscopic appearance are simply those of unstriped muscular fibres tissue. The large tumours often on section show cavities of varying size, with serous, red or milky fluid in the spaces. The tumour grows by hypertrophy of the bundles of fibres first affected to deposit
of material similar in structure to that first involved, the nature of the tumour is determined by this fact and its fibres are radiating in organisation, instead of being hypertrophied highly developed as those of the uterus will by which it is surrounded. This is no adhesion proper between the surface of the tumour and its capsule in normal conditions. There may be one or more centre of origin in the same uterus, but as a natural result one or more tumours in the same uterus. The growth of fibroid tumours is slow, but during pregnancy towards the menopause, they grow more rapidly. Beyond however challenges this fact as regards pregnancy it states that it has the opposite effect after the menopause the growth is usually arrested.

These tumours are usually divided into submucous, subperitoneal and Interstitial, although all tumours are primarily interstitial. The tumour on growing presses equally in all directions and therefore of developed between two layers near the mucous membrane than the peritoneum it will probably press in the direction of least resistance it seems.
Submucous & Mucous Tumours (Boyford). The subperitoneal grows up into the abdominal cavity, elongating the uterus, the pedicle varying in length & thickness. The tumours may even become detached from the uterus after attached to other organs. The submucous variety growing into the cavity of the uterus may be attached by a broad base or pedicle, the pedicle being sometimes as long as to cause the tumour to hang in the vagina, or present itself at the vulva. The interstitial remains in the substance of the uterine wall & do not become precacculated. Usually there are many such tumours present. Thomas describes the uteri of women containing thirty five - t Schultz counted as many as fifty in one uterus (Hard & Barnum, p. 352). The submucous variety has the greatest effect on uterine growth; it also in a less degree the interstitial kind. Hard & Barnum record a small fibroid in the lower segment of the uterus, which caused the whole organ to hypertrophy to the size of a child's head. In the submucous fibroid the mucous membrane is also hypertrophied & especially that over the surface of the tumour, where it may form adhesions or ulcerate.
The chief degenerative changes are:

1. Softening, which may be due to edema, fatty degeneration or myxomatous degeneration. The edema is to be noticed in many cases of sudden increase in the size of the tumor. Myxomatous occasionally occur in consequence of fatty degeneration of the fibers. This is especially noted where a gravid uterus has such a tumor in its walls, after the expulsion of the ovum, whether prematurely or at full term. When the usual process of retrograde metaplasia is set up in its proper muscular layers, the same process is set up in the homologous neoplasm interbedded among them. As the uterine wall returns to normal pregland measurements, the tumor diminishes and may altogether disappear (Simpson, Manual of Gynaecology p. 209). Three cases where these changes took place are recorded in the same book.

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2. Calcification. The calcareous deposit was known to the ancient writers as uterine calculus. I have seen it in a woman of 92 years of age.

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Where the fundus uteri was occupied by a large calculus, covered by what appeared to be only peritoneum, but which the writer considers interesting of rare occurrence; the editorial note suggests that the calculus was probably a calcified myoma of the uterus. Pirchard points out that in calcification, the lime is only deposited in the fibrous tissue. Calcification usually occurs in aged women, and only affects subperitoneal and interstitial fibroids.

Suppuration occurs in subperitoneal fibroids, also the result of injury from operative interference or from constriction of the pedicle during the process of expulsion. It has also been observed in subperitoneal fibroids, accompanying calcification or from torsion of the pedicle (Has-Baum). No fibroid tumours are recorded as having undergone cancerous changes, although cases are recorded when a phlegmorrhagic fibroid has been mistaken for a cancerous tumour. Thomas points out that in the depress where fibroids are 20 common as to be considered universal after the 30th year, carcinomatous affections of the uterus are rarely seen. An interesting case of sarcomatous degeneration is recorded by Dr. Ballantyne in the Lancet. Edin. Med. Soc.
11th IX. 1883-4. Of a recurrent fibroid of the cervix uteri which was removed three times, the second time at an interval of a year and the third time seven months later. The first occasion the tumour was composed of muscular tissue, the second time a mixture of spindle cells and muscular fibres, the third time, an increase of spindle cells and a decrease of muscular fibres. Byford denies the tendency of these tumours to become cancerous or sarcomatous.

Pathology. The causation is unknown, although some foreign observers have endeavoured to inquire into the subject, but without much success. In 1890 we may well quote Thomas. He was Clarke. "Nothing is known regarding the causes of these tumours, fifty years of research have thrown no light on the aetiology." They are associated in some way with the sexual activity of the female; they are never seen in the female, nor do they commence growing after the menopause (Byford). The majority of patients are between the ages thirty and forty, when they first seek medical advice. Schroeder says that of 196 patients who during three
years of his private practice consulted here for female tumors, 104 were between forty fifty, and 62 between thirty forty.

Of 919 cases collected by Guericke, 672 were married women. He also records the following:

- 15 was below 20 years
- 167 " between 20 & 30 years.
- 357 " " 30 & 40
- 338 " " 40 & 50
- 36 " " 50 & 60
- 12 " " 60 & 70
- 5 " older 70

Total 919.

Lawson Taft records the following analysis:

- Under 20 — one case
- between 20 & 30 — 29 cases
  " 30 & 40 — 113 "
  " 40 & 50 — 113 "
  " 50 & 60 — 61

Statistics from the consulting rooms of female practitioners will show that the disease is of extraordinary frequency, it when one considers the number of patients who never consult a medical man on such a process such a tumor, the disease must seem be more frequent.

Beyond other American researches state that their
Tumours are most common in African races. (Barnes, 747) Page "They are comparatively rare in women who have borne children, and are most common in old maids." Barnes apparently errs by confounding the fact that sterility is a result of fibroid tumours and not its cause. They are much more frequent in married women than in singles. A fibroid tumour which has been apparently quiescent may grow rapidly after marriage (not cancer).

The symptoms are menorrhagia, irregular menstruation, dysmenorrhoea, painful menstruation, dyspareunia. Other symptoms, which may be added, are sterility and sterility.

Menorrhagia. The amount is not proportional to the size of the tumour, indeed a comparatively small tumour is very often associated with a large amount of haemorrhage, while in cases of large tumours, the increasing, size of the abdomen, together with the interference with the abdominal respiratory organs, may be the only cause of alarm to the patient.

The character of the haemorrhage in its gradual increase, the bleeding comes from the hyperplastic mucous membrane of the
general uterine cavity, the irregular bleeding arising from the ulceration of the thin mucous membrane over the tumour, or from the rupture of the dilated veins of the capsule.

Of the secondary growth towards the peritoneum
the menstruation, is not increased, fewer
amenorrhoea may result (vide Case 17).

According to Bayford (p. cit.) the nearer the
mucous membrane to the greater the membrane
is expanded, the greater the amount of hemorrhage
of leckenhoff, and as a counter fact the
nearer the serous membrane the less is the
amount of these two discharges
the secret symptoms, while the tumour is still
in the pelvis, are those of interference with the
functions of the bladder & rectum (vide Case 17).

In part cases pylematic oedema, & sometimes
adenoma spines in the lower limbs may be
noticed on account of pressure on the fore
known trunks & nerves in the pelvis.
As the tumour gets into the Abdomen, it
interferes with the abdominal respiratory
functions, and in very large tumours they
may be alone the cause for operative
interference. Inflammation, suppuration,
& frequent of these tumours produce the ecstas
first observed in their disease.

Cleidothyroid arteries are common in cases of fibroid tumour, the hypertrophied hypertonic mucus membrane forms an unfavorable setting place for the imprinted ovum. The uterine is mortally sensitive to the presence of the ovum, while the mucus membranes is rendered incapable of decidual changes, the nearer the tumour is situated to the mucus membrane, the less likelyhood of pregnancy, the more remote the greater the tolerance of pregnancy. (Bayford)

"The tumour may compress the ovaries and hinder ovulation," or may hinder the onward progress of the ova maturation; so that ovula are never fertilised. The fibroid tumour may lead to interruption of pregnancy at any stage. And that the development of the fibroid varies from term, the child is apt to be found at the class in some irregular presentation or position in consequence of the irregularity in the wall of the cavity where it is lodged. (Simpson, A.R. 208)

The question of fibroid tumour in relation to pregnancy & labour may be less advantageously studied. As already noted, although Bayford
Despite this fact, the tumour grows with
the growing uterus, yet it is certain that the
tumour may involute and become much
smaller. Some disappear with the post-
partum involution of the uterus. The
complication with labour may be slight,
according to the situation, age, length
of pedicle, & other circumstances of the
tumour. If the tumour may be pushed
above, lifted up out of the pelvis, the
child be delivered naturally, or such
dangerous operations as Caesarean and
Bakerian section, or Dono's operation
have to be performed. Prof T. S. Simpson
of a case of Dono's operation, pregnancy
complicated with a placenta.

In case of tumours growing into the cavity
of the uterus, the tumour may even be
extruded, in front of the or after the birth
of the child.

Progress & Results. The progress varies
in different cases, at the menopause, the
tumour usually ceases to grow; it may
diminish in size; some disappear, even
some cases however this does not take
place, and the patient still continues to suffer. Curious spontaneous disappearance of the tumour has been observed by many, and has been chiefly associated with the menstruation and menopause. Lawson Tait also notes several cases of disappearance of the tumour after abdominal operations, t even exploratory incisions, in which the tumour was in no way interfered with. Another natural cause of these tumours is that known as spontaneous ulceration, of which a good example is afforded in Case TV—Barnes (As of Women, p. 757) describes this in these stages: I. A bulging or projection on the surface. II. A pedunculation of the tumour forming the ordinary uterine polypus. III. The actual detachment of the tumour, the uterus being the tumour as a foreign body or parasite from the Stark & Bartner note two additional methods of expulsion: A. By excision, in which the tumour is removed en masse out of the body. B. By the breaking down of its substance & breaking down of its fragments, the latter is dangerous in account of its slowness & consequent absorption of the
Hysteria, hectic fever or fatal result often following. This last condition often occurs after labour, the tumour either from injury or compression having become necrotic. Inversion of the uterus has been noted to be caused by the spontaneous expulsion of a fibroid polypus.

Prognosis, depends 1st. on the age of the woman, 2. the distance from the menopause 3. the site of the tumour the most favourable in subserosa

The symptoms present, haemorrhage being especially regarded. 4. The rate of growth — Thomas advocates great caution & prudence in regards prognosis.

The fatal results (Byford) arise from haemorrhage, pressure, & complicating inflammations. Hart & Barbour note that death partly follows from their presence & when it does, it follows from 1. Suppurative of the tumour + death from sepuchralia 2. Septic peritonitis

1. Anaemia due to compression of the arteries 2. Acute peritonitis
Diagnosis. The diagnosis of these tumors is in most cases fairly easy, especially when large. The history of tumors often the concomitant history of sterility or abortion, the hemorrhage, will often lead to a correct conclusion. The use of the sound with the usual precautions is to be noted as an aid to diagnosis. In case of small tumors or polypi, they may be diagnosed on vaginal examination. Often in order to make out intra-uterine tumors, dilatation of the cervix by lute or Hegar's dilators is necessary. Introduction of the finger into the uterus is necessary to discover them. In some cases an abdominal tumor has only been diagnosed as a fibroid after an exploratory incision has been made. The aid of X-rays is also very useful in diagnosis.
Treatment

The treatment of these tumours may be divided under three heads, Medicinal, Electrical, Surgical. The medicinal treatment is founded on the natural process of elimination or the pathological change, which have been observed in these tumours. An instance of this latter is the treatment by chlorides of calcium, recommended by Stenon. bead. With the object of getting lime salts deposited in the substance of the tumour, this treatment however, although perfect in theory, has not gained favour in practice, according to Prof. T. R. Simpson. The premature development of an active demineralisation sounds a note of warning regarding its continued use. Yet Remondis of France and the mineral waters which contain these salts have been recommended as influencing the arrest of growth when absorbed in tumours of this nature. Again I quote Prof. T. R. Simpson, "These seem to exert some portion of their influence by acting as sedatives to this vital organ, lessening the activity of the circulation within them, so as reducing the pathological activity. As in all internal diseases and
especially in the aliment now under discussion. the drug which exerts an influence not only in the way of checking haemorrhage, reducing the size of the tumours but also in elimination is {	extit{frigo}} of {	extit{pyr}} - its action depends probably on its contractile power on the blood vessels diminishing the blood supply to the tumours, retarding the contractile activity of the aorta, which has already been referred to. The beneficial effect of this treatment is curiously enough questioned by Stetson in his last works, but with the records of Hildebrandt König, Thomas (Sicher 37) & Robinson of Dorset now before me, together with what I have noted in the cases I append, one can have no doubt of the great benefits derived from the use of this drug. Two most interesting cases by A. RIDER are noted in the American Journal of Statistics 1865. The one case measurements record the decrease in size of the tumours, in this story, the fact that the tumours after the action of {	extit{frigo}} of {	extit{pyr}}, commenced to be expelled by the uterine activity. The method of administration of the drug maybe by the mouth
15m. of the liquid 3 times daily, whether in the form of a suppository with or without a little morphia every evening, or every second evening, it lastly but most of all by the Hypodermic injection, which was primarily introduced by Hildebrandt. His theory is, that compression of the tumours little place, subsequent fatty degeneration & absorption. Dr. H. Thompson recommends the following formula:

\[
\text{Electra} \quad \frac{3}{7} \\
\text{Anqua} \quad \frac{3}{7} \\
\text{Schor Hyd.} \quad 3 p.
\]

Which solution has also been used in obstetrics with good results, the solution in cases of fibroid to be administered every second day until the influence of the drug begins to be felt, afterwards twice a week, the dose being 12 m. of the above solution. No bad after effects locally at the seat of injection if given deeply into the muscles of the hip, or to the cystic tumour generally should supervised. An ordinary case of fibroid tumour might be treated as follows: 3 times of Muriatic acid, 8 grds. of Phosphoric acid, with a vegetable infusion during the menstrual period & cystic cases during the menstruation or haemorrhagic period.
Besides Hyoscymus, the Berocúdos, which are used to aseal the hemorrhage as frequent in myoma, the use of infusion of Cotton-root Bark, has been recently recommended by Dr. Garrigues and Dr. Rentier in a case reported by the latter, pain due to the myoma is stated to have been partly relieved by its use. Three teaspoonfuls of powder to a pint of water was used in the preparation of the infusion, which is freshly made every day, and divided into three doses for the day.
Electrical Treatment

In placing the electrical treatment before that of the surgical, I am probably following what would be the usual course of treatment adopted by a specialist, who speaks of the recent advances in that treatment of latest years. I postpone the consideration of the removal of submucous or more or less pedunculated tumours, what may be called minor surgical treatment until later

The publication by Dr. Apostoli of his wonderful results on 1873-4 in the application of electricity to the pelvic organs, especially to the uterus, after after-acouchement in the case of Submucous Tumours, has created quite a revolution in uterine therapeutics. It has divided operative gynaecologists into two schools of thought electrical and nonelectrical. In the Apostoli side one has Keith, Playfair, and against these there can be put Tait, Bantock, and others. The ordinary practitioners, naturally, therefore hesitate between two opinions.

After seeing my own cases treated at the Women's Hospital, Liverpool, by my friend Dr. Burton, I felt so interested in the subject that I visited Dr. Apostoli at his headquarters.
in Paris & Queen Keith in London, to let for myself some of the results of his new remedy, Dr. Queen Keith, whose predictions I had heard, was kind enough to inform me that he had arrived at the following conclusions regarding the abortive method.

I. That in large fibroid tumours which had existed for a number of years, and were of hard consistence, the prognosis must be guarded, that the result depending in relief of symptoms might be probably not to nil.

II. That in tumours of about three years of age or under 10 years which he described as of about '7 lbs. the results ought to be most satisfactory, as regards the reduction of size and especially with the belief be marked in the less severe, accompanied by haemorrhage. The haemorrhage also being much modified.

III. The treatment to be applied, every second day at first or afterwards two or three times a week, a period of haemorrhage being as contraindicated to its use. Thirty applications commencing with about 50 milligrams rising up to 250 milligrams, might be useful much improvement
Surely, the subject of this note is of some importance.

I have just received the news of the tragedian's death, and I am now writing this letter to express my sorrow and sympathy. He was a great artist, and his loss will be deeply felt by all who knew him.

May his memory live on in the hearts of all who loved him. Please accept my condolences on this sad occasion.

Yours sincerely,

[Signature]
What one has heard him called a "quack."
An enthusiast would be a proper description.
Secondly everyone with personal vested
interests for or against the treatment should judge
it for himself, judging from
my experience his reception will be a met
Opposite one.
In a short introductory, clinique to
Dr. Apostolo stated that a once-witten Fellow
non cystic or fluid not containing pus
was a fit case for his treatment, even if
its diagnosis was doubtful, that an application
of moist electricity according to his method
would certainly aid in clearing up the diagnosis.
Further in cases of ovarian or uterine pelvic
pain, his treatment with the interrupted current
would be most efficacious. Dr. Apostolo
showed us his carbon electrode with which he
worked in succession little areas of the uterine
cavity in cases of haemorrhage, also his bipolar
electrodes for treatment of painful conditions. He
also showed us later on the practical application
of this latter instrument. I was especially
struck by the fact that all the other patients
were present in the room while anyone patient
was under treatment, which seemed to injury
The loud cries of the other patient, female under treatment, I was also struck with. The observation of antiseptics—

one of the gentlemen present who had attended for some 18 months informed me that he had seen wonderful results.

It seems to me this keeping in view the statement of a celebrated operator, like Keith, in the British Medical Journal Dec. 10, 1887, that "If I would consider myself guilty of a criminal act were I to advise any patient to put the risk of her life, before having given a trial to this treatment," one can only say that Apostoli has established a good claim to a fair and honest attempt at the elecrolysis of uterine fibroids. Before considering the question of operation, Dr. Apostoli presented one with two tables by Dr. Delitang of Nantes "on the treatment of uterine fibroids by the method of Apostoli, another uterine fibroids, their treatment by electricity (Methode Apostoli) and the frequent elimination of parasitic ones by the action of electricity." Dr. La Force states, in his paper, it was noted by myself might pass under the latter section of Dr. La Force's paper.
In the above paper, the notes of the cases before and after treatment, and confirmed by the cooperation of the practitioners who had the case to be treated, point of them these remarkable results.

The apparatus may be described as follows. It consists of a battery of 30-40 large lead-acid cells placed in a coil room or passage, so as to prevent corrosion of the liquid. The zinc or negative pole of one cell is joined to the carbon or positive pole of the next, with the result that a free zinc and a free carbon are left at either end, and constitute the negative and positive poles of the battery. Wires attached to these poles are brought into the consulting room. One is fixed to one side of the commutator, the other is fastened to the rheostat, the free end of the wire coming from the rheostat passes to the galvanometer, thence to the commutator. The circuit is completed by two wires passing from the commutator to the patient. The strength of the current is measured by the galvanometer. This by its means corresponds to the number of cells. The resistance of the tissues varies greatly in different people, and the polarization of cell and tissues, after the current has been passing for a time, together with chemical changes in the cell, will detract from its power. The galvanometer, accordingly, is the only accurate measure of the use of electricity employed, its use has done more than anything else to place the therapeutical value of fascination.
on a scientific basis" (Taylor, Medical Annual 1888 p. 235)

Electricity is brought directly to the patient by means of a large clay abdominal pad to the front which is passed into the internal cavity, or the needle which punctures the tumour from the vagina. The abdominal pad is made large, as the skin is a bad conductor, and also because there would be much pain or even destruction of the skin, caused by the passage of a strong current of electricity through it at one point. One pole must be situated in the uterus or in the tumour. The patient is placed in the lithotomy position, the vagina washed out with an antiseptic lotion. In cases of haemorrhage the negative pole is attached to the abdominal pad of sculptor's clay, the positive pole connecting a piece of carbon about one inch in length, as thick as can pass into the veins, connected to an insulated penis and inserted into the cavity. The passage of the current often causes no pain, but in some cases the pain is sentimental severe. The skin over the abdomen becomes quite red. When haemorrhage is not a symptom the negative pole is connected to the uterine electrodes; then as the negative pole requires 30, 100 milliamperes would be too strong a dose to commence with. After the application, which lasts five minutes, the vagina is agougut out, a part of antiseptic gauze may be placed in
In some cases it is impossible to get the sound into the uterine cavity, so that when the tumour can be reached from the vagina, a puncture is made directly into the mass. In the case of positives punctures a fine gold needle is used, for negatives, steel is used. The first object for the puncture is behind the position of the cervix, or where the cervix is felt (Hone Kent) Medical Annual 1870, p. 100). The needle is fitted in a handle insulated by a sheath of celluloid to within half an inch of the point. When a puncture is made special attention must be paid to antiseptics.

The puncture is never deep, about a quarter of an inch being the usual limit. "The bladder has unusual relations, in some cases of myoma, as it may not be unnecessary to advise the operator to be certain of his actual position before using substances punctured with vicinity." (Taylor Med. Annual)

The improvement obtained is often very considerable. In some cases the cure has been complete, but in the experience of many, the effect for good has been brilliant, beyond the expectation of the operator.

The patient should rest after operation. "If a cure is to be secured, on whom electricity, when applied to the uterus, causes much nervous excitement, hysteria, &c."

[Handwritten notes and text continue]
Mr. Lucas Steptoe wrote on gynaecology:

"Electrolysis is the procedure par excellence in cases which may be placed under the three following categories:

(1) That of uterine myoma, under which symptoms are somewhat definite, while the tumour increases but little in bulk.

(2) Case of cystic tumour where operations are inadvisable. This method differs from what has been attempted. The uterine electrode is short-shaped, is an inlay of platinum carried on an insulated handle, and capable of being bent so as to enter the cervix or fundus. The large electrode is made of tin covered with tinned with leather, so that it is a plate of potters' clay. The latter is to be chosen where currents of great strength are used. These observed, however, in the matter of strength current found that it need not be so great as is generally supposed; for this way they get rid of one class of objection to the treatment, that they employ more than 60-65, I usually use more than 45-55 milliamperes. The application is invariably begun with the negative pole, the subsequent setting up the current usually of diminished strength, is repeatedly renewed. Number of sittings varies from 14 to 24. In occasional return to treatment is thought necessary. The published results are most satisfactory. (Bull. Med. Journal, Apr. 12, 1890, p. 557."


- Surgical Treatment.

In the case of pedunculated tumors projecting into the vagina, or visible at the introitus, traction with a forceps is sufficient for their removal. Sometimes a pair of scissors may be used to cut through the pedicle. If the tumour be of large size it may be split in two or divided successively in size, gradually by feeling and slowly rotating it, like taking the pith of an apple. The scissors, set of devices may also be used. Sometimes it may be necessary previously to dilate the cervix by tents or the ease dilators in the case of intrauterine tumours of the same operation described about employed.

In intrauterine tumours with a broad base, evacuation after incising the capsule, by the finger, or better still by Jno. H. Kemner's needle curettes, may be practised. The discovery of evacuation in the case of large fibroids at Heumarkte, Peritonitis, Epitheloma. Therefore in this as in all surgical operations antiseptics must be strictly adhered to.

The operation of evacuation is applicable only to cases of peduncled tumours, much more to the mucous membrane than the cervix membrane.
In cases of deeply situated tumours, the same author considers laparotomy to be the least dangerous operation. After examining the interior of the uterus and finding a sessile tumour, or less frequently, deeply situated, it may be better, in order to leave well alone, incise the capsule, divide the capsule bilaterally, and try the action of both sides, to continue the excision. D. J. Hooker in his book (1867) relates a case of excision.

p. 225. 6. Lawson Tait described cases of the uterine dilatation and excision especially in cases of soft myoma. It is true the method of excision from the abdomen is the most direct, but whatever be the condition of the patient, the surgeon must follow the rules laid down by nature in the spontaneous dilatation, and personally the author has used the cautery to promote spontaneous expulsion efforts.

Treatment by Abdominal Section

The treatment of pelvic tumours by abdominal incision although recommended by early in the day by Tait, should only be resorted to cases where
From the large size of the tumour in the haemorrhage consequent to it, the patient's life is endangered only after a few days. The author's method has been as follows: Fait's idea of treating myoma is as follows:

1. If the patient be under 30, menstrual uterine appendages may be at once accepted as the proper course, the certainty of cure being at least 95.7%.
2. If over 35 and the cure at longer intervals, to operate at once. Rate of growth is at all rapid...
3. After 40, if haemorrhage is not as severe, to use salt and large doses of salt to be used, and strict confinement to bed, during the whole of the duration of the haemorrhage.

In cases of poor women, "C" being impossible, operation to be performed in nearly every case. "No uterine troubles, injection of earnest and to electrical currents.

Fait also mentions the total of unexpected absorption of these tumours which I have earlier referred to when we refer to the records of Fait, Fait to other skilled operators, and those that not only in the operation, but in skilled hands a tedious one, but not requiring great surgeon's aid.
Preparation for the operation on the part of the operator:

The operation of tubectomy includes the removal of the pedunculated uterine fibroid, the uterus being left untouched. 2. The amputation of a portion of the uterus along with the tumor. 3. Removal of the ovaries or destruction of the adnexal membranes in soft muscular fibroids as practiced by Sait-Keith. (Medico-surgical journal 1887) Place the morbidity of supravaginal hysterectomy for fibroids as at least 25% of severe infection as giving hem the least morbidity of favorably healing at least fibroids, he records in all 64 cases of hysterectomy, in his first 38 cases his morbidity was 7.9%, in his last 26, four deaths occurred or about 15%. In most of these cases the ovaries could not be removed.

In the same article Keith says: "I have never been in favor of hysterectomy because the death rate is so high, because it is performed for a woman the removal of a uterus is partly kills. The also advantesc Aprosotie's treatment in preference to abdominal operation."
Hydrocecum is not as frequently performed as it used to be. When performed, however, continue to congratulate the uterus with moderate success. Dr. Bantock at Edinburgh is a chief exponent of this practice. In a few cases the operation may be out of necessity, and it is therefore important to find the best way in which to perform it.

English operators at present appear to prefer the transperitoneal method of treating the stump. New experimental work is being done in America.

Reports from the Scientific American of 1890 announce that...

Dr. Wyble: "I first tie the broad ligaments with silk. Then put in the wire, being quite close to the muscular tissue of the uterus. Before tightening the wire I take two or three pieces of silk, pass them through the broad ligaments, and pull the loop of wire, one or either side, then tighten the wire and also the silk. Thus we have three attempts. In this way Dr. Wyble intends to completely close the broad ligaments on each side of the uterine stump to prevent the possibility of recent infiltration into the tissues of the broad ligament."

Dr. C. E. Lee: "I have observed better results from the clamp than any other form of retractor. I have lost only one..."
Dr. Poelm (ten cases, one death reported): "The broad ligaments are ligatured, as practiced by Dr. Poelm. The tumor is excised as low as the base of the proposed amputation. The artery is then adjusted around the base of the excised tumor, and therefore, inside the peritoneal covering of the tumor. The tumor is cut off at the anterior "face" with the stump at its base, to return to the abdominal wound and sutured."

Dr. Poelm: "The peritoneal covering of the stump both above and below the wound is stitched to the abdominal peritoneum."

Dr. Poelm (seven cases with two deaths): "The elastic ligature is used, tying, securing the peritoneum around the pedicle below the ligature."

Dr. Gordell (six cases treated by his intra-peritoneal method — all successful): "The pedicle is transfixed with a double ligature and tied on either side provisionally. The tumor is then cut off at the pedicle. The stump cut out at once to be sutured. Each ligature is now united and tied tightly. The peritoneal edges of the stump are drawn closely together. The pedicle is dropped."

Dr. Kelly (combined with the peritoneal operation — one case made an easy recovery)
"In this case the pedicle was treated first as in the intra-peritoneal method, by careful ligation. The uterine arteries were secured on each side by special ligatures and the stump, instead of being dropped, was sewn into the lower angle of the abdominal wound, the line of suture used for this purpose being below the level of the united tips of the stump, but above the ligatures of the uterine arteries.

The removal of the appendages is the most popular method of treatment among English surgeons. Its success is very satisfactory, the mortality being only about four or five per cent. However, in many cases the appendages are found to be inaccessible. It is in a very small minority of cases the growth of the myoma as is found to be unchecked by their removal. Lawson Tait, in his recent work on Diseases of Women, notes 106 cases of removals of the appendages for myoma with two deaths, up to the end of Aug. 1875. Since then up to the date of publication, he has in all 1674 cases with 230 more deaths from which he quotes his mortality as the mortality of the operation 1.5%"
I have now reviewed at fair length the whole of the treatment of uterine tumours up to date. And before presenting my list of illustrative cases I will add a few concluding remarks regarding the treatment of that tumour. The medical treatment with Epsilat and Wurtz salts should be certainly tried with as much rest as possible, sexual or physical, especially about the menopause or period. A careful examination under chloroform of necessity should be made in order to ascertain the presence of the growth, its position, as to whether it can be removed or not by the vagina. In case of intra mural or subperitoneal tumours this laparoscopic method of treatment ought to be tried carefully and diligently. Supra vaginal hysterectomy being a very dangerous operation. The operation for removal of the appendixes is in the hands of an experienced surgeon a less slight, the operation of predictions. The cure almost certain, when practicable, but as before stated, the appendixes are not always accessible.

Dr. Cot, Medical Annual 1888 recommends the following:
(1) To open the abdomen absolutely verify the diagnosis.
(2) To remove the appendixes when this can be done completely safely.
(3) When this would necessitate much manipulation and possible hysterectomy, if close the abdomen after recovery from the operation has occurred. Although the treatment by colchicum is preferable.
Case I. Abdominal Tumour of the Womb

The first six cases have come under my own observation.

O. B. aged 36, married, complains of painful swelling in left side of her abdomen, first seen Nov. 30, 1859.

Personal History — Menstrual commenced at 14, lasted 8-9 days, always profuse and accompanied with pain, many clots passed at periods.

Sexual History — Married 5 months ago, after marriage bloody discharge at intervals, & menstural discharges were copious than ever. The month ago noticed a lump on left side of abdomen, went to a doctor who said she was 5 months pregnant. The lump since then has gradually grown bigger & more painful, what alarmed her most was that she was externally looking blood clots. She states she had some faint recollection of noticing the lump on her right side about two years ago.

Examination of abdomen reveals a fulness to left below umbilicus, rising up from pubis almost reaching umbilicus, upper border slanting downwards towards lower left flank & symphysis pubis, doubtfully elastic on palpation, no sound heard on auscultation.

P. V. Womb lying up cervix normal in antevertical.
and projected to the right side. Right facet dilated, occupying posterior left laterial fornix to a chord mass. Continuous with the Abdominal mass and moving with the uterus. Sound not passed.

Diagnosis: Hernia of uterus.

Treatment - Rest, no coitus, douche.

Follow up - Erysipelas chronic at Menstrual period, a few days before and after Sept 12, 1890. Periods regular 6 days, no pain no clots, tension apparently flatter than all patient much stronger.

Patient is quite content, does not want any further treatment.
Caeas II

A 47 yrs., married at 25 yrs. of age, has had 4 children, youngest 19 yrs. of age, one miscarriage with 1st pregnancy at 4th month, has had no
menstruation since then. Labours all normal
Menstruation began at 14 regular, scanty, lasting
20-23 days.

History of present illness. In her years after
birth of last child had irregular flowings. In
this she consulted various doctors. Finally our
doctor at the end of the two years diluted the
comm 1 removed a small fistula about the
size of an apple, which she said was a fibroid
tumour. For 5-6 months afterwards she was
quite well. When the flowings again occurred
lasted for 3 to 4 months, when she had some pain
and another that she called a fibroid tumour came
down. No doctor being then in attendance
the remained quite well until 11 yrs. ago, when
she was admitted into the S. Pest Hospital.
Surgical branch with an abscess in the front.
The doctor told her she had a lump growing in the
right side of her breast. The then for the first
time noticed this lump, which has grown slowly
until it has now attained a very large size.
As to inconvenience her walking, she also suffers from incontinence and occasional retention of urine. No rectal trouble. During all the time menstruation has been irregular, but recently it attended with slight pain before its onset. Examination reveals an abdominal tumour about the size of an eight months pregnancy in shape, bulging into the flanks, fairly movable, hard in consistence, except over umbilicus and right upper corner, where cystic impacts may be felt. P.V. uterus in front, a little lower than normal, tumour felt clear of Pelvis and with the uterus is evidently closely attached to it. Sound not passed. There is some watery secretion in breast and right anterior round muscle.

She was admitted Jan 14, 1891 in the Ward H. Hospital for Women, Liverpool, under S. Burton. The chief growth, the previous history, besides the close attachment to uterus, the cystic feeling of parts made the diagnosis of huge cystic uterine tumour an extremely probable one. The patient who had evidently studied the case was extremely anxious that the "Interior" treatment should be tried.
Circumference of 36 pound lembelce 40 inches.

Treatment Jan 16. 1870

50 milliamperes for 5 minutes, positive pole in uterus, passed 2½ miles. Copious bloody discharge for 5 days afterwards (medical Jan 21st) 50 milliamperes for 5 minutes

Next 3 hours for a week, ceased with careful washing and injection of normal saline every night.

Jan 31st. Battery fried, found not to be in working order

Feb 4. 200 milliamperes

5. Remove 36 pound lembelce, patient states also she feels smaller & tumour lower down. This may be partly attributed to the hyperaemia draining the peritoneal cavity & the uterus.

Feb 7. 170 milliamperes for 5 minutes

Circumference at umbilicus 40 inches

Feb 11. 160 milliamperes

15 150. Patient menstruating

Temperature rose to 99° after application of battery to 100.4

March 1st. Palm pain in abdomen. Measurements remain

To umbilicus 9 ¾ inches. From umbilicus to pubis 16 inches.

R. Ant. 5½ inches. Left pelvis 5½ inches. Left lat. hip 8 inches.
Circumference 4" above umbilicus 36"

At umbilicus 39"

Feb 15: Temperature normal. Pain still continues.

Feb 16 Pain gone.

17. 120 mph.

18. Went home for a fortnight for rest. She states that she feels smaller and better. Can bend forward more easily. Medical opinion shows improvement. The baby will probably again be tried if no result, by stereotyping will be proposed.
CASE III. ETHEL SUMNER OF THE ALTUS.

J.B. married, aged 46, complained of a feeling in her stomach. Bleeding from the womb.

Menses began at 15; always regular but scanty until present ailment began to trouble her 3 years ago, when they became very much increased in quantity.

Personal history: has been married 25 years, has had two children 20 and 18 years old. Has never had any miscarriages.

History of illness: Until about 3 years and 3 months ago she was quite well and quite regular in her monthly discharges. About that time it began gradually to increase in quantity and to last 6 days.

"3 days bad + 3 days coming off" as she expressed it. Two years ago on three different occasions she had to sit her door and draw her, being unable to face it. The doctor when examined her found she had a tumour of the womb. She had not then noticed any swelling in the abdomen, had not until lately noticed it. From that date (2 years ago) the menses although quite regular kept on increasing in quantity, and last December 1869 she describes it as her "currant juice" constantly for 6 days."
Physical Examination: Patient cheery, healthy, looking well nourished, not anaemic. Examination of abdomen difficult owing to much fat on abdominal walls. On deep pressure hard mass felt in right hypochondrium extending to middle line & rising to a level of about 1/2 way between umbilicus & pubis.

P. V. cervix high up behind pubis & to the left, a hard mass felt posterior & to right, continuous with cervix. Pelvimetric mass in abdomen continuous with cervix mass felt on P. V. almost right of a 4 months pregnancy. Continuous with uteros of moving with it. Evidently on the posterior right side. Sound passed 5 to front.

Sent the woman on 18/9/19 to the Shrewsbury Hospital, Liverpool.

Treatment: Appoldi - forceps poles in.

12th 75 &g; for 5 minutes (Maneckin).

22 150 ..
13 150 ..
26 150 ..
28 150 ..

Complain of pain during application. Also during forceps applications.

Woman became very impatient, was discharged at her own request. No apparent benefit from treatment.
CASE IV. Spontaneous expulsion of tumour after Infusion Treatment.

Mrs. W., aged 32, married 24 years, one child 28 years old, 2 miscarriages. For a number of years had suffered from painful menses, too much weakness, dyspepsia, pain in the limbs, especially after much exertion, or walking about. This went on until she was 63 years of age. Then she became alarmed at her increasing weakness, & the fact that the "change of life" had not yet arrived. She then consulted her own doctor who attended her for 18 months but without benefit. After this she put herself under treatment at the Women's Hospital, Liverpool, where a tumour of the womb was diagnosed (1888), two live was put on hot foment. 30 mg three daily, with as much rest as possible. As there was little in the way of improvement on June 23, 100 milligrams of Acridotin, a weak solution of which was injected into the tumour. It had been noted as enlarged anterior wall of uterus, signs of child's head, enlarged uterus reaching almost to umbilicus), a week after 150 mg. which caused her no much pain & the uterine bleeding of abdominal wall. That she did not go back to the hospital for two months - the sight of treatment being meanwhile continued. On her next visit...
(Sept. 1889), 100 milliamperes, positive polonium was again passed. For the next two months, expert treatment still going on. Patient suffered from continuous abdominal pain, & cramping at times. The menses were regular, only lasting 3 days and in the intervals a redly, Kennel-breast discharge was noticed - on Dec. 11, 1889, the pain was most severe. Much hemmorhage of discharge, so that in the morning of Dec. 11th, the doctor was sent for, and removed large bloody masses from her vagina. On Dec. 12th her condition was as follows, pulse 120, temperature 102°, Skin hot & dry. Per vagina, nearly Kennel's discharge, containing much debris, as putious, admitting two fingers with ease. Uterine cavity, large + roomy, at left upper part anteriorly was to be felt a large cavity, about the size of a closed fist, with stringy bands hanging across it. A tough projection on its surface.

Patient ordered stimulants, careful nursing and antiseptic douchings. For seven weeks she suffered from debilitated state, temperature always rising at evening - expert treatment returned during last few weeks. At the end of this time, uterus not felt for abdomen, lump disappeared of uterus apparently normal in size. Patient much emaciated.
Least I fear in anterior wall of uterus—
Patient aged 44, married 26 years, one child 27
years ago. Three years married, before she became
pregnant—menopause began at 16, regular intermen.
bialy or 10 years. For last 8 or 10 years has been
very irregular, lasting 6-10 days, and irregularly
lately. It has been more or less. Last before
June 1879, she a bleeding which lasted a fortnight
which caused her to call in medical advice.
4 years past had had a pain in left side
work at menstrual periods. Three years ago
consulted a doctor who said she had a tumour
of the neck of the womb.

Recent condition—Patient very anxious: weak
by the puffing up, & first taken, I losing a
large quantity of blood, & clot constantly
coming away. Dr. Chapman. Conv low
down,螳美ed, ut the same time posteriorly
placed, anterior fornix contains a rounded
hard palpable. Bimanually, uterus felt about
path is enlarged. Diagnosis: Pituit of anterior
wall of uterus. Treatment—In all patient had
eight injection of tincture before discharges stopped.
She has not been well since for six months
then falling gone to much stronger & better
pain in side to much better. She is quiet.
pleased with the cure & does not care for any further treatment.

Case 17. Large fibroid, haemorrhage treated by hypodermic method under Dr. Simpson at the Edinburgh Royal Infirmary.

Complete cure of symptoms.

Patient 44, married 26 years ago, has had 5 children. Two miscarriages, one between 2nd & 3rd child & one seven years ago.

Menstrual history: Regular up to last menses; since then one continual flow from completely stoppage. In Sept. 1849, was so bad that her medical man recommended her to undergo operation. Her friends however stopped it. She consulted Dr. Veitch, myself. The result being that she went to Dunbar last Sept, she returned last November & since that time until Nov. 15, 1850 she has been quite well, had no discharge. Yesterday, Nov. 15, she had a slight change, which continued to day.

History of tumour - six years ago first noticed swelling which was then hardly up to navel. A little gradually till Sept. 1849 was about the size of a small apple, pregnancy, the last sufficiently, in walking. Development almost constant bleeding. In Sept. she talked about the went to Edinburgh. Slight.
depressed having lost so much blood. She has had hemorrhage for two years. An abdominal examination also per vagina a large tumor can be felt. Some palpable 4 feet inches.

Through the kindness of Dr. Bird & Williamson I am able to give the treatment she received in Boston.

Sept 9. 200 milliamperes.
. 13. 250 " 10 minutes
. 15. Bathing again
. 16. Bleeding quite ceased
. 17. Hot douche ordered to be used twice a day. The bleeding has resumed patient attributes it to the cold douche
. 21. 100 milliamperes, only could be done
. 25. 200 "
. 24. Temperature took to 100.6, that a sign.
. 25. Temperature 99°
. 27. Bathing seven, after which a feed deal of bleeding. The following mixture was given 18 C. 41 F. 201 317. In two Eichler's Aug 30th - 3% three times a day.

Sept 30. Bathing again applied. No bleeding

Oct 2. After bathing. Bleeding common as again

Oct 3. 200 milliamperes slight bleeding for 4 hours after
<table>
<thead>
<tr>
<th>Date</th>
<th>Dosage</th>
<th>Duration</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st. 25</td>
<td>201 Milligrammes</td>
<td>12 minutes</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>200</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>200</td>
<td>12</td>
<td>Bleeding afterwards, 15 mg of Syr. injected three times in the day, within 12 increased to 36.</td>
</tr>
<tr>
<td>14</td>
<td>201 Milligrammes</td>
<td>10 minutes</td>
<td></td>
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<tr>
<td>16</td>
<td>200</td>
<td>15</td>
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<tr>
<td>24</td>
<td>160</td>
<td>16</td>
<td>High fishing</td>
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<tr>
<td>24</td>
<td>201</td>
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<td>27</td>
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<tr>
<td>26th 1st</td>
<td>200</td>
<td>15</td>
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</tr>
<tr>
<td>4</td>
<td>200</td>
<td>15</td>
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<tr>
<td>6</td>
<td>200</td>
<td>15</td>
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</tr>
<tr>
<td>8</td>
<td>200</td>
<td>15</td>
<td>No bleeding</td>
</tr>
<tr>
<td>11</td>
<td>200</td>
<td>15</td>
<td></td>
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</tbody>
</table>

No pain or bleeding.

12 No discharge. Patient states, she feels much better, less prostration. She has a little pain in her left side when she walks. Tumour is smaller especially in upper part on right side. Examination: Patient decreased in the few 12. She hardly thought the tumour either harder or softer. Especially on right side. Measurements, however, showed no distinct diminution. She felt much
Strongly this had no bleeding since Nov 3rd.
She still has some remember, but much les
than before.

Nov. 10, 1850. I have seen the patient several times
since she came from Edinburgh. The tumor
appears to be about the same size as it was before
the went to Edinburgh. The place at the left
upper corner was particularly tender. She
has enjoyed remarkable health since she came
back, following her employment as a sewing
machine. She says she never felt better in her
life. She has no pain, no difficulty in
walking or bending. Nothing she commited
with a slight red discharge. This is first time
she has had any since she left Edinburgh in
October 1850.
Cases Illustrating Benefits of Eject Treatment

A. Causing diminution or absorption of the Tumour.

Case I. (Wellesbrandt). Patient, age 31, tumour for 34 years when as large as at seventh month of pregnancy; haemorrhages frequent & copious. Injection of Ejectin practiced daily for six weeks when menst became regular & painless—Injection continued daily for fifteen weeks more, when tumour which had been growing smaller from week to week was found to have disappeared.

Case II. (Wellesbrandt). Patient, aged 45, tumour reached to umbilicus, antverted, large fibroid in anterior wall; haemorrhages, & irregular menstrua. After resort to injection improvement was well marked, fundus descending to a point midway between umbilicus & pubis.

Case III. (Godrich reported by Bafford), uterus 20 inches farsemner diameter, & vertical 19 inches, filling whole space between the ilia, extending up to supravesical part of pubis—Belladonna used. The treatment lasting two years. Report at end of that time was "The had convulsed rapidly, was in enjoyment of fine health.

Case IV. (Redder) Patient aged 43½, unmarried, regular up to three years ago, when she noticed swelling.
After abdomen, abdominal swelling getting larger before it decreases after menstruation, also proceeds most slowly. For two months then had been no nausea, abdomen was much enlarged and present symptoms were present. Two months, 7 of myxoma diagnosis, and although patient desired operation, Biddle advised 7 injections to be tried. For ten months (with intervals) various attempts of myxoma was given by the month, there was no decrease in the tumorous but periods gradually returned, became regular and at the end of six months patient had a brownish discharge of considerable quantity. Per vagina - 7 injections was now tried 120 injections in about four months. Periods was now every three or four weeks. At about eighth days before each period the passed large quantities of brownish fluid. Abdomen was now less in depth (3 cm), 7 injections were discontinued.

<table>
<thead>
<tr>
<th>Measurements</th>
<th>40 mm Hg</th>
<th>110 cm before</th>
<th>108 cm after treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circumference at umbilicus</td>
<td>18</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Symphyseal</td>
<td>21</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>R. ant. Spine</td>
<td>23</td>
<td>21</td>
<td></td>
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</tbody>
</table>

Ten months after patient was in excellent condition, circumference at umbilicus 85 cm, uterus about 2%g.

If three months pregnant...
Case V (Pentis) Mr. B. mother of six children, youngest between eight & ten. P.V. uterus elevated hypertrophied and tumor in anterior wall near fundus. Tumor gradually enlarged to enlarged to size of part of head. Could readily be felt above pubis. She was 44 when tumor was first discovered. Menopause did not come on till she was 50. During that time menstruation was very profuse lasting 2-6 days. Recurring every 2-3 weeks. By use of ergot (30-60 min three times a day) it had been kept within bounds and she able to attend to her household duties. The tumor also diminished in size & came (55) to no longer felt above pubis with difficulty per vagina.
B. Causes of puerperal tumour.

Case T (Bristol). Patient 35, married, non-pregnant. Born Dec 31st, complained of head lump two inches to left of umbilicus, membranous, thin and soft, weight of pelvis. Examination revealed hard lump behind tumour, movable, extending to within two inches of umbilicus, filling up the whole of right iliac, hypogastric, lower half of umbilical and more than half of left iliac region. Stood raised upright, backward & to left, 5½ inches. Commenced Dec 20th, with 30 mg Equitran. 4th, 8 mg thrice daily. Dec 26 pulse 110-120, fever pains over uterine, mass or less haemorrhage.

Great profuseation after first day — Ergot discontinued on third day, having been taken — Jan 11th, 1876. Patient began to have some vagina small masses of yellow substance eery in colour & attending froth. This continued till Jan 21st. When patient was very comfortable, uteri much diminished in size, and tenderness subsided. Ergot taken again for four days, nausea then discontinued. No more pains passed, but atop Feb 1st a thin offensive yellow discharge came away, Ergot for a fortnight from Feb 1st. Then stopped. Feb 26. Patient up, uterine normal in size & completely cured.
Case II. Patient married, 47 had fibroid in uterus, in anterior wall, which press with the uterus to within two inches from cervix. After taking 20 of Est of 10 per cent daily for ten days she had severe

pain in uterus, she stopped off for a day or two then took it when pain went less severe until Dec.

13, 1877 (treatment having begun Sept. 1876), small

pieces of tumour showed itself in the discharges

on the 26th of month it had all come away

permanently — 4 to 5 days after operation

she suffered from septic symptoms, but a month

after was perfectly well (found passed 27/2 miles

[removed]).

Case III. (Piddler) Patient, sister of case already

reported, married, 38, one child one miscarriage.

Academic complained of menorrhagia. Dilatation

of uterus per vaginam. Tents reveals intramural

fibroma of anterior wall. In two weeks after patient

had severe haemorrhage to local doctor gave her

40 ml. In three days after patient found something

leaking from her genitals, which was removed found

to resemble fungous mucous membrane.

Three weeks afterwards Piddler summoned for an

appendiceal tumour hanging from the dilated

internal os.
Cases from various named sources illustrating the treatment advocated by Dr. Apostoli.

**Note:** The first three cases listed at Apostoli's Clinic.

**Case I.** Patient 41, had a child 21 years ago, New Land. After her confinement had a heart attack, and dates her trouble from that time. She is quite regular. Complains of swelling in abdomen, and constant pain in left side, worst at menstrual period.

P.V. uterus mobile, huge irregular lobulated abdominal tumour felt moving with uterus, reaching to umbilicus & into both deep fossae - felt also in all the fornices.

Apostoli administered constant current 40 mpa for five minutes, preserving pole in uterus. This was only the second or third application.

**Case II.** Patient 57, married had had several children (could not account for all of them), had much haemorrhage at last labour, and suffered much from menorrhagia. Metrorrhagia since then. In 1876 (March 13 - 1876) to the 14th application of electricity. She first appeared at the Clinic in July 1879, complaining of severe haemorrhage, swelling in abdomen & frequent retention of urine. She was then very weak & anaemic. Had been for 18 months...
Previously, in bed in a country hospital, under treatment for this haemorrhage, she was then virtually unable to walk. Now she looks a fairly healthy country-looking woman, walks easily, but abdomen still much enlarged & protuberant.

Deep vaginal bleed high up behind pubis posterior cervix occupied by a large mass, which in continuity with mass felt in abdomen, reaching a little above umbilicus in middle line. If tending into right iliac region, I'm left side reaching as high up as lower border of left ribs. (The first report in July 1879, describes the tumour as completely filling pelvis & abdominal cavity.)

Treatment began with 150 mp (potassium iodide) which was gradually increased up to 180 mp—by day 140 was administered. The notes of the case gave measurements in September, after successful application showing tumour had diminished, and that walking/tending were much easier.

Case 117. Patient 40, married, miscarriage 1½ years ago, no children since. Irregular for last year, ov. Some time ago missed 2 months then menstruation became more & more frequent—she bled from Dec. 30 to Jan. 17, in such quantities as to make her seek relief soon after the latter date.
Patient is a dark pallor 60 year old Frenchwoman.

P. V. uterus well back, anteriorly fixed, occupied by a round mass continuous with uterus. Bimanually large round fundus felt two inches above pubis.

In this case, I, Kostolli, demonstrated the use of the uterine scissor at present using the interrupted current to relieve the painful symptoms, prior to using the constant current.

I, Kostolli, also used the uterine scissors in two cases of Retroversion with ovarian enlargement.

Case IV (1925). In the 42, 60 year old ladies, 24 application

Ass. from a fibrous mass of nearly soft consistence

about the size of the head of a one year old child,

occupying the right iliac fossa — almost complete immobility — Menstrual suppressed — Edema,

broad lower limits, especially the right, which is of considerable size — Phlebitis resulting from a year ago — Violent abdominal pains — Walking standing

are nearly impossible. After the treatment the

tension divided into two parts, the edema and the

pain better have almost disappeared and she is

able to return to her occupation as embroiderer

which she continues to follow since the treatment.
Lacer (Sectio) Madame 547 years old.

47 applications, large hard mass filling the abdomen. Circumference at umbilicus 1 meter 7 centimeters. The belly moving without leaking - An erosion and incision has been preferred at Paris - No loss or discharge - The first 20 applications of 100 M.P. having no result I employed currents of 150 to 250 through 280 M.P. which last dose was borne with great difficulty. Under the influence the mass exfoliated itself into 10 nuclei extremely hard tumors less mobile. The abdominal circumference fell to one 86 cm. B. Brunnard of the maternity at Mante, has also followed up the patient; who since the time, has increased a little in size, but not nearly reaching her old circumference - The interference with respiration is much less marked than before -

Case 17 (Sectio) Male. 47 years old. I found the sign of an orange developed in the posterior part of the uterus. Body of uterus contracted. Uterus adherent immobile. Hernomphragt ecchymotic pains. Light applications - Body of uterus mobile - Pain in discharge ceased. The uterus remains the same Result. Definite cure of symptoms which persist a year 3 years after.
Case 69. (La Roche) (from St. Vincent's Clinic.)

Madam, 6 years 37½, has had two children, suffers from a hyperplastic uterus, containing an unattached fibroid, with hemorrhages very frequent of course for several years past which has resisted the ordinary treatment. Uterus much enlarged. The sound passes with difficulty through the tortuous canal — General condition bad face cachetic, extremely fatigued, unable to do her work of walk with difficulty. I saw Oct. 26 1876 to Nov. 27. Ten intrauterine positive applications of an intensity of at least 100-150 cens. for 5 minutes at a time were practiced, all well borne by the patient — The hemorrhages diminished considerably. The patient took her walks and went out between the applications — General condition improving — In December the cervix partially closed, opened spontaneously and the finger recognized the presence of polyplugs, unrecognized till then. From Dec. 7 to Jan. 3, 1877, eight other positive applications were before determined — The dilatation of the cervix was performed and the finger now defined a tumour the size of a big hen's egg, with a large surface of attachment beside. Through the impatience of the patient E. Apostolos had to complete the process by surgical interference.
Drsixth (1849-1850)

R.B. aged 36, was admitted into hospital for a
total hysterectomy of the uterus. The tumour reached
up to the umbilicus, extending 5 inches to the left
and 3 inches to the left from the middle line.
The uterus was fixed to the right by old adhesions.
The sound was passed 6 1/2 - 7 inches.
She has had seven children - t suffered from hae-
monorrhagia on and off for two years. She was very
anemic and weak.

Electric treatment was commenced
July 22, 1857. The continuous current from 0 to 8000
was employed. The electricity was practiced 8
weeks with four days intervening, the operation
lasting 10 - 12 minutes. Having commenced with
the positive pole, the haeomorrhage persisted. The
positive pole was tried with good results, in fact
the one, unless was sufficient to completely arrest
the haeomorrhage.

The mass in the abdomen
diminished gradually, but after the last application
of electricity, the patient had a febrile attack.
Temp. 103. The temperature lingering between this
point and 99° for two days - A bloody vaginal
menstruation began to show itself, very putrid in character,
at the same time we observed a passion on the
region, where the presence of the tumour was noticed.
There were also abdominal pains.
On the 4th of September the pains became most
excruciating, the patient compared them to
labour pains, and a large globular mass was
found across the surface of the womb, descending
into the vagina. Next day this mass, belonging
to the left portion of the tumour, was removed by
pressure application of the coraeur. This
mass was entirely removed.
The 5th kept her temperature was 104°, it remained
at this degree up to the 8th, at that time
another mass presented itself at the surface of the
abdomen. It was also removed by the coraeur.
This time it was the right portion of the fibroid —
the principal portion originally. It was more
painful than the first. Local examination
showed that the whole tumour had been expelled.
The temperature gradually became normal.
The woman was convalescent by 15th of Sept.
The discharge was moderate. It was
without pain disappeared. The beginning of the
treatment up to convalescence occupied 35
days.
Mrs. Jenkins, married age 40, came home from India for the electrical treatment in the beginning of 1868. The lady had never been at all robust, but she had been able to enjoy life until a few years ago. A broad tumour of the uterus had been palpable for her bad health in late years, these complaints the relieved after her pain + transport. It passing again. The chief symptom is pain situated principally in the lower part of the back. There is also a general feeling of discomfort, especially much worse during the periods, which are said to be severe, which also appear to fibre. The lady looked ill. She was thin & weak, the examination. The abdomen a very prominent tumour has been felt. The mass extends upwards to the umbilicus. The abdomen wall was then, it was tightly stretched over the tumour—in passing the finger into the vagina, the finger is felt almost at once, as found to be tightly packed into the pelvis. The cervix is elevated. The ovary is situated as far back as possible towards the right side.

23rd March 1868 - 60 millimetres of mercury. 26th - 55 - - -
28th - 60 - - -
This found passed much more easily.
Apr 25. 75 milleamps, 5 minutes. 
This is now quite a well-marked effect.
Apr 27. 70 mAs, 5 minutes. 
Sensation decidedly smaller.
May 10. 65 mAs, 5 minutes. 
The period got through much more easily 
than usual; the long interval of rest from 
treatment being accounted for by an attack of 
dizziness.
12th May. 65 mAs, 5 minutes.
15 " 60 " 5 "
17 " 55 " 5 "
19 " 45 " 5 "
Unable to stay this round has been connected to 
the negative pole of the battery, but in account 
of these being more pain than usual, it was 
only partial. Some great relief.
June 8 - 50 milleamps, 5 minutes.
Anode was made to the negative pole. The 
feeling decreases steadily, the abdominal wall 
losing pain - the period was much as the 
last - 11 June. 45 mAs, 5 minutes.
13 " 70 " 5 "
15 " 50 " 5 "
30 " 40 " 5 "
A very long period, with little flow.
July 27. 65 million per for 5 minutes.

July 25. 75 " 5 "

July 11. 60 " 5 "

July 26. 55 " 5 "

July 28. 75 " 5 "

July 30. 85 " 5 "

Aug. 1st. 85 " 5 "

Aug. 3rd. 100 " 5 "

Aug. 6th. 50 " 5 "

Aug. 21st. 105 " 5 "

This person has been again early.

Aug. 23. 75 million per for 5 minutes.

Aug. 25. 120 " 5 "

Aug. 27. 135 " 5 "

Aug. 29. 135 " 5 "

The count was made positive during the last four applications. The lady is very well; the tumor is decidedly less than half the liver's size. The average strength of inspiration has been 75 million per.

May, 1859. General health has been very good, the lady has been able to do anything she wanted to for the last nine months. She has lost the old happy look to a quite pleasant expression. The tumor smaller.
Case X - A woman aged 36 - for a number of years she has not known what it was to feel well, even for a day - she was always more or less ill, but then she would have been able to put up with it. And then she noticed that during the time of the menstrual flow, the subject was particularly painful, headache, stiffness of the membranes. So those attacks of pain and stiffness, which occurred at intervals of three weeks, morphine had been taken in increasing doses for some years. Treatment of all kinds had been tried without relief. It had been suggested that she should have an operation, but this she would not consent.

Examination: A large tumour was found to entirely fill the pelvis. The 4th condition was made out with some little difficulty, on account of excessive tenderness in every direction. The passage of the tumour was not easy from the same cause. Treatment by electricity was agreed to. The lady came to town twice a week for the applications. She had a railway journey of 1400 miles each way.

Apr. 9 - 75 milliamperes for 5 minutes.
11 50 50 50

The passage of the sound caused much pain that the applications were badly borne. She was very tired after the first one.
May 13.  70 mill. for 5 minutes
   16 "  65 "  5 "
   18 "  65 "  5 "
   20 "  65 "  5 "

May 15. 50 "

The period has been quite as distinct as usual

The usual dose of morphia was taken:
May 5 may 60 mill. for 5 minutes
   8 "  80 "  5 "
   12 "  65 "  5 "
   15 "  50 "  5 "
   29 "  40 "  5 "

There has been morphia, but accompanied by less
pain than before; it is morphia has been
taken for three weeks. This is said to be the
longest time she has gone without the struggle

June 2. 50 mill. for 5 minutes
   4 "  65 "  5 "

She says that she is feeling decidedly better and in
fact almost quite comfortable. The tension is
much smaller

13 June. 75 mill. for 5 minutes
   16 "  70 "  5 "
   30 "  70 "  5 "
July 3 75 milliamperes for 5 minutes
  7 80
  10 75
  14 70
  17 70
  18 50

There was much less pain, & the morphia was required.

Aug 4 50 milliamperes for 5 minutes
  11 50

There is now scarcely any trace of the lesion, although the strength of the current has not been great - the treatment will be discontinued in the meantime.

May 1889 - On examination, the pelvic contents appear to be normal. There is still some pain of occasional headache, but the improvement is very great - morphine is not required (except Keith, the treatment of uterine tumors by electricity).
Case XI (S. Burton) Mr. L, age 32, married 8 years, no child not miscarriage. She has from the time of a full-term fetus — First application 120 milligrams positive for 3 minutes. Monthly, Eight applications 157 milligrams per fracture pole, 4 minutes. The tumor had diminished to one fourth its original size. Now plainly under complete control.
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