tonicity, and is manifestly unduly soft to the touch, and, *pari passu*, more easily flexed than usual. [At a later period the uterine tissues may be found, however, unduly hard.]

There is generally a well-marked history of accidents, falls, strains, or the like, such as would be likely to accentuate or increase or produce a decided flexion or increase of flexion of the uterus. There is usually an obvious connection as cause and effect between the mechanical disturbing force and the onset of the symptoms.

The symptoms are found to be relieved and their occurrence prevented more or less completely, and in most cases immediately, by so treating the uterus (by rest alone or by aid of mechanical supports) as to lessen the degree of the uterine displacement, or so as to prevent its exaggeration by ordinary bodily movements.

ON THE TREATMENT OF FIBROIDS OF THE UTERUS BY ELECTRICITY: THE USE OF POSITIVE GALVANO- CAUTERISATION.

By W. WOODHAM WEBB, M.D., M.R.C.P.LOND., Neuilly-sur-Seine, France.

I AM not going in these observations, which I wish to make purely practical, with a view to bring a subject which has much interested me under the notice of others, to enter upon any description of the histological characters of the various tumours we meet with in and about the uterus, nor upon any discussion as to the way in which electricity acts in controlling their nutrition, arresting their development, causing their diminution, and regulating the combined functional powers of the ovaries and their appendages, among which the uterus must be included as perhaps the most important. Men may differ in their opinions as to what constitutes a uterine tumour. Practically, it is of more importance to look to the symptoms depending upon excessive deposit of tissue in or about the organ. And with regard to the mode of action of electricity used curatively in such cases, we must for a time be content with knowing the fact that it does what we propose to do in a manner safe, comparatively easy, and in a reasonably short space of time. I propose in this article to point out the way in which one of the modifications of the operative proceedings are applied to the relief of the different classes of cases, and to give illustrations by reference to patients who have come under my own examination, or of whom I have been able to verify the history, and to note the result of what has been done for them.

Putting aside all other considerations but those of treatment, these uterine fibroids range themselves into two groups. Those which are hæmorrhagic or leucorrhœal, and others which are not so, but where the attendant evils arise principally from the arrest or disturbance of the periodical functions of the organs of generation, and the mechanical interference with the position and continuous operation of the viscera concerned in organic life. In both groups we have to get rid of effects, and to remove the cause of these effects. If one woman is sinking because she loses too much, another flags because she loses too little. Both have a tumour which is the cause of the suffering. In the one case, we must begin with checking the outflow of blood with which the woman's powers and life are oozing away; in the other, we must re-establish and make easy a salutary exudation, by suppressing the secondary local inflammation or nervous irritation with which the deficiency is associated. In both we have to direct our ultimate efforts to producing a structural change in the overgrowth with, if not its destruction, a diminution of its bulk sufficient to allow of a return to all the suspended conditions of functional regularity.

To attain these ends, after the method of Apostoli, we have in our hands two powerful remedial agents: the positive pole of the electrical battery, which is antihæmorrhagic; and the negative pole, having contrary powers—hæmorrhagic; and being also, as Apostoli calls it, "*démétritif*." This negative pole is used in two ways, either for intra-uterine cauterisation, or by way-punctures in the diseased tissues. It is in the exact adaptation of these means to the end proposed that we have reason to hope for success. The leading indications are simple enough, but qualifying conditions come up at each step of progress and demand vigilant caution. With that and experience no treatment can be more free from pain and danger, no results more satisfactory. Delicate manipulation, patience, circumspection, and a thorough knowledge of what may be the consequences of either rashness or timidity, are the requisite qualifications of an operator. These are to be abundantly met with among the members of the profession,

but I am afraid that the questions of time and convenience, inevitable in electrical operations, will often be found incompatible with the ordinary engagements of practitioners. Operative details would be

out of place here (see JOURNALS, Nos. 1379 and 1331), and I must confine myself to indicating how, in a typical case, without complications, the treatment moves onward. I take, first, the use of the positive pole in cauterisation.

A patient with one of these interstitial hæmorrhagic fibroids is generally an object of pity. She comes to you pale, exhausted, often changing her position to relieve her suffering, walking with difficulty, unable to work, complaining of headache, sleeplessness, palpitations, with the breathing quick, the appetite gone, the stomach rejecting food, the bowels constipated, the bladder irritable, lancinating pains in the lower part of the body, a sense of weight and fulness in the pelvis, cramps in the thighs, and lymphatic stagnation, with swelling of the feet. At her periods she loses profusely. They come too frequently, and there is sometimes almost continuous hæmorrhage, or hæmorrhage alternating with leucorrhœa. Examination discovers the uterus enlarged, with a tumour bulging into the cavity or projecting outwards, distorting the body, shortening or obliterating the neck, bringing the whole mass low down into the basin, and necessarily pressing on the bladder, obstructing the rectum and impeding the movement of blood and lymph.

The first indication here is to stop the loss which is draining away life. Period or no period, the positive galvano-caustic is applied to the cavity of the uterus in proportion to the measurement and the power of endurance of the patient. At this first sitting she may not be able to bear a higher intensity than 50 or 100 milliampères for more than five minutes. The first cauterisation is always tentative, and tests the susceptibility of the patient. We must always avoid causing any severe pain. In a few cases the electro-chemical action set up in this one application stays the bleeding. Occasionally it is followed by a slight aggravation of all the symptoms. This is a precursor of better things, and the patient may be tranquillised by the assurance that it will soon subside, and give place to a period of calm and improvement. It is rarely necessary to do more than enforce perfect rest in bed. The gauze in the vagina must be changed, and injections regularly used. Repeated on alternate days, or every third or fourth day, the dose is gradually augmented. An eschar is formed, the mucous membrane is renewed, the surface becomes contractile and resistant, exudation cannot easily take place, and the hæmorrhage is stayed.

The woman soon shows the effect of such relief. She sleeps, has less languor, and is more disposed to food. The stomach digests the food she takes, the circulation is freer, the nerves less agitated, and the lymphatics work. A few days of such unwonted nutrition make a great change. The countenance brightens, the spirits are more elastic, and with hope and confidence the woman now asks for a continuance of the treatment which at first she submitted to passively and fearfully. The positive-pole cauterisations go on at intervals varying according to circumstances, with interruptions at the time of menstruation. By degrees one can prove with the sound a lessening of the uterine cavity. The tumour shrinks, its form changes, it sometimes becomes nodulated. The abdominal and pelvic troubles grow less and less, the periods are natural as to time, quantity, and character, health is restored, and the woman resumes her usual habits. Contraction of the tumour goes on for some time after cessation of the treatment, though it very seldom happens that it advances so far as to leave no tangible trace. What remains is an inconvenience easily suppressed, and to which habit makes the bearer indifferent. It is satisfactory to find, from five years' experience, that relapses are exceptional. Once arrested, the disposition to growth of the tumour seems to be definitely suspended, the residuum is an inert mass, and the patient keeps free from trouble. It has happened that an early menopause has been brought about. There have been no dissections to show the histological changes.

I have summarised a few cases. CASE I.—Madame B., 26 years of age, sound constitution and general good health. Married when 16 years old. Had three children by the time she was 23. Labours natural. Menstruation before marriage fairly regular, scanty, and without pain; after marriage more frequent, more abundant, but still painless. Health remained good up to January, 1886, when, after a severe shock, caused by the sudden death of one of her children, her troubles began. Menstruation was suspended for two months—at the third month slight reappearance. She now became subject to giddiness, frequent fainting, and loss of appetite. Was laid up with an attack of rheumatism, complicated with cystitis and hæmaturia, for fifteen days in April. Menstruation recommenced, and became profusely hæmorrhagic. This continued, with intervals of eight or fifteen days, from May to September; flow often mixed with clots. Health gave way; she grew thin; coughed, with bloody expectoration; lost all desire for food, and had incessant pain in body and back. Dr. Legris, her attendant, and M. Tillaux, of the Hôtel Dieu, ascertained

the fact of her having a fibrous tumour of the uterus, and sent her to the *clinique* of Dr. Apostoli on the 21st September. She was then unable to work, pale, emaciated, with lumbar and abdominal pains, made worse by any attempt to walk.

Neck and body of the uterus hypertrophied and hard, the front part being the principal seat of the fibrome. Measurement $8\frac{1}{2}$ centimètres; cavity large. Intra-uterine positive galvano-cauterisation, 100 milliampères, five minutes on the 23rd September; repeated on the 28th, 225 milliampères, five minutes; and on the 7th October, 250 milliampères, five minutes. No great pain, and she returned home an hour after each sitting. By the 11th of January, 1887, ten cauterisations had been made. Natural menstruation began in September, and has since been regular, moderate, and without pain. The relief was so marked that she began her work of *femme de ménage* on the 21st of October. Treatment ceased in January, 1887, and she is at present (June) well, and working daily without inconvenience. She has gained in weight 16 lbs., and the measurement of the uterus is $7\frac{1}{2}$ centimètres.

CASE II.—Madame P., aged 39, healthy, menstruated in early life regularly, abundantly, and painlessly. Five children between twentieth and twenty-ninth year. When 24, had no appearance for six months. Two months after her last confinement had a first attack of menorrhagia, great loss, lasting ten days, sharp and incessant pains. This returned when she was 36, and went on for three years to the time of her consultation in October, 1885. Weight and pain in body, which render working and walking difficult. Health injured, and often obliged to remain in bed. Fibrous enlargement of uterus, especially of posterior part. Measurement, eight centimètres. From October 29th, 1885, to December, 1886, eighteen positive galvano-cauterisations, from 100 to 250 milliampères, for five minutes each. After the fifth sitting—there having been five intercurrent faradisations to allay the abnormal pains—improvement began. Pain lessened, movement became easy, and the organic functions were re-established. Menstruation appeared regularly and in natural proportions after the tenth sitting, loss only during two or three days, without pain. Treatment ceased in December, 1886. Uterine measurement gradually came down from eight to six centimètres and a half. Menstruation remains normal at present date, without pain, though there is slight narrowing of the cervical passage. Uterus movable, posterior part somewhat thicker than natural; no excess of sensibility; health good.

CASE III.—Madame S., aged 30, no children, good constitution, menstruated at 17, at first imperfectly and irregularly. When 20 there was a change, and the flow became copious and mixed with clots. At 22, without known cause, was seized with profuse menorrhagia, which lasted for eighteen months, only short intervals of eight or fifteen days, and those painful. Married when 20; at 28 second menorrhagia, which continued for three months, with same symptoms. At 30, a third attack, which kept her almost constantly in bed from November, 1885, to April, 1886. This was severely painful, and her health gave way. She lost flesh, had frequent gastralgia and vomiting, and found the ordinary treatment useless. Examination of the uterus gave a measurement of seven centimètres. The whole body was enlarged, considerable hard fibrous deposit on right side; the neck hard and resistant.

From April 8th to July 3rd, 11 positive galvano-cauterisations, 150 to 200 milliampères, five minutes. She bore them easily, and returned home after an hour's repose. After the sixth sitting, on May 19th, menstruation came on without pain, and in less quantity than she had seen for six years. The treatment was continued till July, when feeling herself well and able to do her household work, she gave up attendance. Some extra fatigue in August brought on loss for a few days, but it ceased with rest. Since then she has remained quite well, free from pain and pelvic troubles. She is much stronger and stouter. The sound shows only five centimètres and a half.

CASE IV.—Madame T., aged 51, mother of ten children, has passed a life of hard work and good health; had a miscarriage when 30, and, besides her own children, suckled three nurslings; menstruation regular and free up to the age of 49; disappearance of menses for twelve months; when 50 was prostrated by menorrhagia, which continued for a year. Had much pain in the right iliac region, lost health and strength, and was obliged to give up all work. Went into the Hôpital Lariboisière, and was under M. Dugué for uterine fibroid; came out at end of a month with only trifling diminution of the loss, and was found to have a large interstitial hæmorrhagic fibrome, involving the whole uterus; measurement, eight centimètres and a half.

The first positive galvano-cauterisation was made *en pleine menorrhagie*. She bore it well, and went home to St. Denis after an hour's rest. From this date (December, 1885, to September, 1886) there were sixteen positive cauterisations, from 100 to 180 milliampères,

five minutes each, and two negative cauterisations to open the contracting internal orifice. After the second positive cauterisation hæmorrhage stopped. Then followed leucorrhœa, and occasional menstruation without pain. All uneasiness gradually disappeared, health returned, and very early during the treatment she took up again her occupation as itinerant seller of vegetables. She is now in good health, has no discomfort, and the menses have entirely ceased. The tumour has become much smaller, and the last measurement gave only six centimètres and a half.

The four cases of which I have given a slight outline are specimens of the work which is going on all the year round at the *clinique* of Dr. Apostoli. There is nothing exceptional in them, and they give an idea of what may be expected from the treatment when applied to the great bulk of hæmorrhagic fibroids occurring in the course of medical practice. I have carefully gone through the original notes of these cases, verifying most of the statements by the oral accounts of the women, and by their assurances and my own examinations I have satisfied myself of the benefits they have received. Many others I have watched from day to day, have noted their progress, and am in a position to testify as to the results. My eight months' experience would enable me greatly to multiply the evidence; but as Dr. Apostoli intends to have a paper read before the meeting of the Association in Dublin, in which he will give the statistics of his operations from July, 1882, to July, 1887, such a repetition of facts would be superfluous.

There are, however, cases of fibroids in which the use of the galvano-cauterisation is not immediately applicable, or is inapplicable in the same degree. These exceptions are of three kinds; cases in which there is a temporary accession of hysterical excitability; cases in which we find what Apostoli calls "*entérite glaireuse*," and others of a subacute form of perimetritis. These conditions must be overcome before the special treatment is commenced, or, if it be attempted, it must be done with extreme moderation and caution. A very few cases only of absolute intolerance are observed. They are generally women in whom there is a high degree of hysterical susceptibility. Such intolerance may baffle us for a time only if we have patience to study the conditions and modify the way of dealing, though in a few instances neither moral influence nor medical treatment has been able to overcome it.

With a delicacy of tactual perception, a cautious regulation of the operative movements, and a watchful eye upon the indications given by the expression and involuntary actions of the patients, there is no danger in these proceedings. The pain is insignificant, the inconvenience very trifling—so little, in fact, that we often have to put a check upon the impatience which ignorantly calls for more active work than would be safe or useful. The treatment does not interfere with the possibility of subsequent pregnancy, and sometimes it seems to be the means of removing the cause of previous sterility.

ON THE VALUE OF HODGE'S PESSARY.

By ALEXANDER DUKE, F.K.Q.C.P.I.,

Ex-Assistant Master Rotunda Hospital; Gynecologist Stevens' Hospital, Dublin.

WITHOUT at all agreeing with those who think that the primary cause of all female complaints can be traced to uterine misplacement, I still consider that there is a large percentage of such cases to be met with due to that cause; and it is a most fortunate matter that by the judicious use of a Hodge's pessary we are enabled to give more relief in cases of retroflexion and retroversion (the most common forms of uterine misplacement), than by any other means with which I am acquainted.

This pessary is the original from which all the numerous so-called improved uterine supports are taken; and it will seldom chance that those who fail to give relief with a properly fitted "Hodge" will be fortunate enough to succeed with any of the numerous uterine supports sold by the instrument makers.

Emmet says very forcibly on this point: "I have never known a practitioner who was able to fix this pessary properly who was not fully satisfied with the benefit derived from its use."

The position of the patient during the introduction of the pessary is most important, and the genu-pectoral, affording as it does the favour of gravitation to the uterus, and, in addition, helping greatly to retain that organ in the desired position till a suitable pessary is chosen and placed *in situ*, should be the position as a rule adopted, unless contra-indicated by some pectoral or cardiac lesion. In no case should a pessary be introduced till the uterus has been replaced as nearly as possible in its normal position.

How often is one blindly inserted while the patient lies on the side or back, probably after the uterus has been rudely rotated forwards by the sound (on the withdrawal of which instrument it is almost