REMARKS

ON

THE TREATMENT OF UTERINE TUMOURS
BY ELECTRICITY: ITS EFFECT ON
SMALL TUMOURS.

By THOMAS KEITH, M.D., LL.D. Ed.

My son and I have already published in detail every case of uterine fibrous tumour which, to the end of 1888, was treated by us after Dr. Apostoli's method. No classification of these cases was attempted. We could not tell if the results obtained were permanent, and we knew well that many would draw different conclusions from ourselves. These rough notes, given as they were taken at the time, were intended for the information of those who had taken up this treatment later than we had done, and in the hope of enabling some to avoid the rocks on which we had split. One's early work in any new direction is almost certainly imperfect, and had we to do those same cases over again, doubtless more satisfactory results would be shown. Now, we have two more years' experience to guide us, and we have a better idea than before of what this electrical treatment consists. The criticisms with which Apostoli's treatment has been so generally received give us now no concern. It is a good and right treatment, and must in time be recognised as such. We know some things that it cannot do, we know better what it can do. We are disappointed that it seems to have broken down in so many hands—at least, we judge this to be so from the number of patients who have come to us more or less imperfectly treated. So far as we can make out, the fault was on the side of the operator. In some, the want of tenderness of manipulation in the introduction of the internal electrode, or an amount of unnecessary pain caused by the current, or the sloughing of large pieces of skin of the abdominal wall from imperfection of the external electrode—a thing that cannot happen if Dr. Apostoli's directions be followed—appear to be the chief causes of an interrupted treatment. Delicacy of manipulation, perseverance, and a knowledge of electricity are essential in carrying out this treatment with any hope of success or improvement to ourselves, or comfort to the patient. Progress here must be slow, and though it has on the whole been slow, we are not dissatisfied. We have reason to believe that the patients thus treated are also satisfied with the efforts made to save them from an operation that either risks their lives, or leaves them with a mutilation, abhorrent to a woman, and, besides, does not always cure them.

The great proportion of our early cases were in hospital or dispensary practice. It seemed impossible to hurt these women in any way. They might be seen, a dozen or more, standing outside in cold wintry weather long before the dispensary door was opened. The treatment was then carried on by my son, and the current was given to as many as twenty in an afternoon, and in as strong doses as could be borne. In some, the tumours were punctured. There was no place for these women to lie down in. They dressed, and went their way out again into the cold, and no harm was ever done. It was another thing altogether when we came to treat the luxuriously living, gouty, neurotic women of the south. It did not take long to teach us that these required more care. They bore the current far less well, and complained more readily of pain. As a rule, smaller doses had to be given at the expense of a longer treatment. In not a single instance did one of them discontinue the treatment of herself, never till they were told to stop; yet these same women bear operations marvellously well. I have never had better results after severe operations, nor have I ever had to do with more pleasant patients.

Generally speaking, the fibroids we have had to treat from the first—and more especially those of the last two years—were cases of large old-standing tumours, the rag ends of every one's work; cases in which everything had been

already tried to stop the bleedings, frequent curettings, years of ergot taking, and of every sort of drug and treatment year after year, as well as endless and useless visits to Kreuznach, to those who could afford it. One lady told us that her various visits there had cost her upwards of £700, and for all the benefit she had got she might as well have remained at home; the tumour and hæmorrhages went on as before in an increasing ratio. She had just been ordered to go back again, but rebelled. Not a few were brought to us after having spent years in bed, and who were almost dead from hæmorrhage. Of these, we have tried every one; not a single case was sent away, though in two the treatment could not be carried out. In one, after three slight treatments, in a patient of Dr. Ransford's; in another, after a recurrence of phlegmasia dolens and inflammatory attacks in the tumour, such as she had several times had before, we soon found that we had undertaken no light task. These feeble ones were necessarily treated in bed, and never have cases given such anxiety, for the weaker the patient by repeated attacks of bleeding and pain the greater is the fear that the current may rouse again old inflammatory attacks, which every case of old fibroid is subject to. Sometimes, also, in the very weak patients the immediate effect is to increase the loss, but this tendency soon passes away. The condition of some of these was such that no surgeon would dream of operating on them in any way. Then these bad cases do not, as a rule, bear large doses of electricity, and the treatment comes to be a very tedious one. The only quite hopeless cases seem to be those in which hydrorrhœa exists to a great degree. There is improvement up to a certain point, but it is not permanent. These are puzzling cases, for sometimes the clear fluid comes in an incredible amount. The discharge must come from the uterus, and it comes sometimes in quite small tumours. It may be analogous to the serous fluid that is sometimes poured out into the abdomen from the surface of a fibroid. Many years ago I had to do with an extreme case of this kind. Every three weeks, six gallons of watery fluid were removed by puncture of the abdomen, leaving a small fibroid not greater than two or three pounds. The removal of this was urged as strongly as I could, but the friends would not accept the risk. After forty-four tapplings, all of a sudden the tumour held and did not part with its fluid as before, no doubt on account of some osmotic change. This was at once followed by a rapid increase of the tumour itself, till in the course of ten or twelve months the small tumour of a few pounds reached the enormous weight of two hundred. Fortunately, such extreme cases are rare. Dr. Apostoli also complains that he can make little of them.

No fewer than one-half of the cases of fibroid we have seen during the last two years were advised to have no treatment whatever, simply because there was no prominent symptom to warrant any interference. These were more or less in good health, and they can always fall back upon this treatment, if need be, in the future. Some of them had been already advised to submit to hysterectomy, and it was the dread of operation that led to inquiries if there were no way of escape from this. These women had good health, with moderate or small tumours, and with moderate or no loss to speak of at the periods. Not a few had been seriously told that if they wished to live their ovaries must be removed, and that without delay. Most women will rather do anything than submit to such an operation, but if their fears be acted on, and they are told that they have a tumour which will soon shorten their days, we cannot wonder at the number of these operations. The indiscriminate removal of the ovaries for small fibroids (not to speak of cases of pelvic pain or dysmenorrhœa) that is recommended to patients and the brutal haste with which operation follows, is now a professional scandal, to say the least of it. No other treatment—no short delay even to see what Nature and rest may do—is allowed. Some eight or ten months ago a lady, whose hæmorrhages were stopped and whose general health had been made well by Apostoli's treatment, consulted me about a young niece, who had had much pain at her periods; fearing that she might have a tumour and become an invalid like what she herself once had been, she took advice about her, and was told that there was no use trying anything: that an operation only would do any good. She had once got the same advice herself, and could not believe that such an extreme measure

could be so soon necessary. I advised her to put the child, for she was little more, to bed, keep her warm and give her hot poultices over the abdomen. The periods have since been almost painless. I have already stated that no part of my work do I now regret so much as that in which I removed so many ovaries for small bleeding tumours, before I became acquainted with Dr. Apostoli's treatment; at that time operation in the bad cases was all we had to fall back upon. Now it is different, and all I plead for is that this new treatment by electricity be tried first before having recourse either to hysterectomy or the removal of the ovaries.

The result of experience amounts to this: During the last three years and a half I have got along without a single hysterectomy in soft or solid fibroids. I have operated three times for large fibro-cystic tumours, one of 38 lbs., one of 70 lbs., and another of 76 lbs. The last operation is, to me, never to be forgotten, for it was the last time I saw my old friend, Dr. Duncan. The patient was the wife of an old medical friend of his. She had an attack of acute mania. She did well till the eighth day, when she refused all food, insisting that the nurse put poison into it. In a day or two she was acutely insane; fortunately the wound was quite healed. She left London thirty-two days after operation, and in three months was quite herself again. In another of these bad cases operation was declined by two surgeons who are greatly adverse to Apostoli's treatment, but are great advocates for hysterectomy. In two cases only have I removed ovaries for small bleeding tumours. In one, electricity had been carefully tried before I saw her, but though the fibroid was reduced, and the loss at the period was lessened, a bad pain from which she had long suffered, and for which she had had the coccyx removed some years before, was in no way relieved. Indeed, her suffering was rather aggravated by this operation. She was a complete wreck. I opened the abdomen, and after some trouble found that the left ovary was lying between the folds of the broad ligament, and enlarged to the size of a hen's egg. This was the cause of the pain, and since its removal her strength is gradually coming back to her. In the other, there was such evidence of the presence of two small ovarian tumours, that I advised operation without any preliminary electrical treatment.

The drawback to this treatment—its tediousness—remains much as before, and the mistake of allowing patients to go away too soon is still, every now and then, repeated. High intensities, with positive or negative puncture—methods which we much prefer—are the only ways by which the time of treatment may be shortened. Some nervous patients bear only a small amount of current, and in these, as a rule, the treatment must be prolonged before any permanent relief can follow. After all, it is only a matter of time; the good result comes all the same, though after longer patience. The treatment may be shortened by giving an anæsthetic. In only one instance, however, has it been necessary to do this, and it may be well to give a brief account of the case, for it shows what can be done when there is a necessity for it.

In December, 1889, Dr. Roose took me to see an unmarried lady, aged 40, as he was getting very anxious, and had already obtained every possible help and opinion for her. The old treatment of every kind was persevered in, and it signally failed to check a hæmorrhage that was bringing his patient and friend to the point of death. The periods for many years were profuse, and during the last seven months these had become most alarming. Now 90 to 110 large thick diapers were used every period, one-half of these being quite soaked. In addition to this there were gushes of blood which these failed to absorb. She was in bed, the state of the heart preventing almost any movement. The pulse was rapid and feeble, and so nervous had she become that she could not in any way be examined or even touched without an anæsthetic. The nurse could not even give a simple enema. The tumour felt soft, and extended three inches above the pubes. The cervix was almost beyond reach of the finger, so far back was it. The sound passed five inches and a half. It could be turned round and round inside the cavity with the greatest ease, disclosing a large, thin-walled, soft, flabby uterus, on which I would be very unwilling to use a curette.

Ether and chloroform agreed equally badly; every time it became more and more difficult to get her under the influence of the anæsthetic. This was not accomplished under half-an-

hour, and on the thirteenth application we were compelled to give up the treatment, Dr. Roose very wisely declining the responsibility of continuing the anæsthetic. The first dose given was 75 milliampères, the next 160, and the rest from 250 to 300. The treatment was given twice a week, and, as she was almost always losing blood, it was continued right on through the period. She was rarely dry, and we were anxious not to lose time, for we were all afraid that another bad hæmorrhage might be fatal to her. Even after such strong doses little or no pain was complained of. The uterine cavity now measured little more than four inches; the sound could no longer be turned round inside; the cervix was easily reached, while the tumour could scarcely be felt above the pubes.

She improved in strength and went to the country. She and her friends were warned that we had never seen such a severe case permanently cured by such a small number of applications, and that the improvement might be only temporary. After this short treatment the first period was easier than it had been for a long time, only 30 diapers being used instead of 100, the second 20, and the third only 13, scarcely any of them being soaked. After these three times she began to go back, and at Roehampton, in August, there was a hæmorrhage. This pulled her down badly, and to some extent brought back the old symptoms. Within the last few weeks the treatment has been resumed; but instead of having it done in her own bed, under an anæsthetic, her physical condition has so much improved that now she comes to the house for treatment, and drives home immediately after. That she will get perfectly well I have no doubt, though the treatment will be long.

Till quite recently we have seen few cases of small tumours whose symptoms were so bad as to need treatment. Nearly all were old, hopeless-looking tumours, one larger than another. As the benefits arising from this treatment are being made better known by those who have themselves been made well by it, there is no doubt that within the last twelve or eighteen months an increasing number of small tumours have been seen. I take of these the seven earliest cases, who have probably had treatment enough to prevent a return of old symptoms or renewed growth of the tumour. It is too early to give any account of a number of others at present under treatment or in whom it has recently been suspended.

CASE I. Small Bleeding Fibroid: Profuse and Painful Menstruation Cured by Electricity.—In the beginning of 1888 Miss W., aged 48, consulted me by letter on account of hæmorrhage from a uterine fibroid from which she suffered, and which had completely broken down her health. Menstruation had always been too much, though only of late had alarm been taken. I gave her what comfort could be given in a letter, and told her that in any case she could not now be far from the end of her troubles. She got so much worse after this that she consulted a surgeon, who strongly advised the removal of the ovaries. Alarmed at the prospect of operation, she saw Sir Spencer Wells, who decidedly forbade any interference at her age. He had every hope that Nature would cure her at no distant date, though in the event of her getting much worse he would advise some treatment by electricity, which would almost certainly stop the bleedings, or, at any rate, carry her over in safety through the menopause. Much encouraged by this opinion, she worked on some months longer, having derived much benefit from the treatment of Dr. Fitzgerald, of Folkestone. Towards the end of the year the bleedings became most alarming, and were accompanied by much pain. From the beginning of September the period went on, in great excess, for nine weeks. After a short interval it began anew, and was going on for the eighth week, when she sent for me in the middle of January, 1889. By this time she had withdrawn, one by one, from various schemes in which she was interested, and was reduced to a condition of complete uselessness, which was intolerable to her. She could scarcely go up a short easy stair, and that only after several rests by the way. The treatment had to be carried on at her own home, for she was unable to go out.

On account of a severe illness I did not see this lady for six months, and was glad to find her then quite well. The treatment was entirely carried on by Mr. Skene Keith, with a rapid and successful result. The tumour, which reached within 2½ inches of the umbilicus, could no longer be felt in

the abdomen, and the pelvic portion was quite small. The os uteri, which at the beginning of the treatment reached within an inch of the vulva and admitted the point of the finger, was now high in the pelvis and was closed. The periods were regular and normal in amount, and she was able to do anything. The treatment consisted of twenty-four applications, the dose, on an average, being 200 milliamperes. When last seen she was well in every way, and there was so little period that she thought it was about to pass away.

In this case, it may be argued that time might have done all this; but time does not reduce menstruation from years of hæmorrhage to a normal amount, for months before it begins to show signs of ceasing. Besides, what possible justification could there be for the removal of the ovaries at her age?

CASE II. Small Uterine Fibroid: Painful and Profuse Menstruation: Disappearance of Tumour under Electrical Treatment.—Miss B., aged 43, had her first bad hæmorrhage four years and a half ago, after a long walk, towards the end of the period. Generally this lasted five days, and was very profuse from the beginning. Ordinary diapers were of no use to her, and instead she had got into the habit of using large bath towels folded; of these she never required fewer than nine. She had been treated by electricity in Liverpool. The tumour spread into the pelvis on each side, and the top of it was 3 inches above the pubes. The sound passed $4\frac{1}{2}$ inches. The patient was a tall big woman, and of the softest type imaginable. She had palpitation and various nervous symptoms that were increasing upon her; the slightest exertion or movement was a burden to her.

Treatment was commenced on October 9th, 1889, and closed on January 9th. She was at a disadvantage for a successful treatment, in so far that she had gone to live in the north of London, about five miles away from us. Her circumstances did not allow of her driving, and she had to come partly by train, partly by omnibus, and partly on foot. Frequent colds and chills were thus got, and there was much time lost. She bore the current well, as the phlegmatic ones generally do, the average dose being 200 milliamperes, and the time eight to ten minutes. Twenty-nine applications were made, for though the tumour was small, it had a habit of bleeding in the most determined way.

At the end of four months she looked better and felt stronger. She was warned not to be disappointed if her strength took a long time in coming back. During the spring and summer progress was slow, and she was advised to come back in autumn for some more treatment. She came in October, and by that time had decidedly improved. She was better in every way, and now never used more than four bath towels, instead of never less than nine. There was no palpitation, and she can dress herself after treatment, which she was not able to do last year from simple exhaustion. There was now no longer any abdominal tumour, and there was no growth in the pelvis—simply a large uterus which admits the sound $3\frac{1}{2}$ inches. Eleven other applications were given, the tonic effect of the treatment being very marked. Her strength has improved every day, and walking is now a pleasure. Practically she is quite well, and I have been written to about the propriety of her getting married.

CASE III. Fibroid Uterus: almost Continuous Menstruation: Electricity: Disappearance of Growth.—Miss W., aged 24, was brought by Dr. St. Clair Thomson. Periods began at 14, and have always been copious. By degrees the intervals became shorter and the quantity greater. For four years menstruation has come every three weeks. The last went on for twenty-one days without any interval: now she never is quite dry, or at least is so very rarely, and that never for more than two or three days. She is thin, though her general appearance is good, considering the almost constant drain upon her. She has no pain, and can walk fairly well. In a word, her only complaint is the long continuance of the period, and its uncertainty as to quantity, the least excitement increasing the flow, sometimes with violence. She cannot go out with a light dress, cannot go to a theatre or concert, or out to dinner, or any evening amusement, or play tennis in summer. She is debarred from the pleasures of young people, and on the very few occasions she has ventured out in a light dress it was almost always soaked through before she got home again.

Remedies have been tried without making any change in this condition. The uterus is large and somewhat fixed; the cervix is very large; the os admits the point of the finger; the probe passes with difficulty $3\frac{1}{2}$ inches, and would probably go farther if the uterus were not so fixed; there is no growth inside the cavity. The treatment lasted six weeks, and twenty applications were made. The current was well borne, and in a good dose. Instead of at most three days' respite, the first interval was three weeks, the longest for the last four years. The period lasted four days and was quite moderate, and as the next was also normal, no further treatment was advised. The uterus was now soft and movable; there was no longer any open cervix; the os was small and closed, the cervix half the size. The uterine cavity was scarcely above $2\frac{1}{2}$ inches in length. We began the treatment on a fibroid uterus probably slowly increasing, for the disturbing symptoms were slowly getting worse. The treatment left a healthy organ. When last seen she had gained flesh and was in perfect health. The periods were normal as to time, and lasted only three days. In August, while living in a very relaxing place, there was a tendency to recurrence of the hæmorrhage; accordingly she left the place, and has been quite well since she came back to London.

CASE IV. Small Uterine Fibroid: Unusual Amount of Pain, with Suspicion of Ovarian and Tubal Disease: Disappearance of Tumour under Electricity.—Mrs. M., aged 40, came in the beginning of June, 1889, complaining of almost constant pelvic pain, especially over the situation of the right ovary. There had always been more or less of premenstrual pain, but for the last year this had got much worse; in fact, she had all the symptoms generally connected with disease of the ovary or tubes. This long continued pain was slowly but surely being followed by the inevitable neurosis. She was nervous, excitable, and irritable, and the general health was giving way. She had had a great amount both of local and general treatment, all proving unavailing. The removal of the ovaries was at last urged upon her, and it was to have this point settled that she came from Dublin. She was almost "off her head" with excitement about the proposed operation, which she was anxious to avoid.

Manipulation was well borne, much better than one could have expected. The enlarged uterus was easily felt above the pubes. The sound passed four inches into a broad cavity. Pain was greatest over the right ovary. The persistent back pain was felt over the upper part of the sacrum; this pain was always increased during the night. The uterus felt the size of about two closed fists; it had little movement. At first I was almost inclined to advise operation as the most rapid way out of her many troubles, for, with pain over the right ovary and the manifest enlargement of the left, there might be a risk that the current would set up irritation in the appendages. As operation was, however, a terror to her, it was agreed to try what electricity might do. She quite understood that this treatment was merely experimental, and that it would be discontinued if pain were caused by it. By the end of August the treatment was finished. She bore it much better than one would have expected from her extremely nervous condition. Here, again, the tonic effect of the electricity was well marked. All nervousness had passed away, and she was able to sleep without drugs, which she had not done for a long time. She took her food better, and became happy and hopeful as the dread of an operation ceased to torment her. By the time she returned home pain had almost disappeared. There was some enlargement of the right ovary, but no tenderness or pain. The uterine tumour had disappeared. There was nothing left but a somewhat enlarged uterus, into which the probe passed 3 instead of 4 inches. The uterus was free and movable. All premenstrual pain had disappeared. The discharge was natural in amount, and less than before. In March, 1890, there was still improvement going on; the uterus was in every way normal, and the general health was good. In August last her daughter called to say that her mother was in perfect health, and was able to do anything. All nervous symptoms had disappeared, and she was entirely free from pain of any kind.

CASE V. Fibroid Tumour in Posterior Wall of Uterus: Profuse Menstruation: Disappearance of Tumour under Electricity.—Miss T., aged 27, was brought by her two brothers—both medical men—who had got to the end of their resources in

attempting to cure, by medical treatment, a profuse menstruation, and restore the general health. The idea of operation was repulsive, in the view of a prospective marriage, which had hitherto been delayed and which her feeble health forbade. The young lady had been ill for about four years with great menstrual losses. At first the loss was almost continuous, then it came chiefly at the periods, the blood coming away in gushes. There was little pain complained of, but much misery before, during, and after the period. She was thin, and her appearance gave the impression of broken-down health. Naturally very active and full of work, she was now depressed on account of her inability to do almost anything. The cervix was behind the pubes, the cavity of the uterus being pushed forward by a fibroid mass in the posterior wall, nearly filling the pouch of Douglas. Treatment was begun in the end of June, 1889; continued during July and part of August, resumed in October, and completed in the end of November. In all, thirty-nine applications were made. In this case we were not hurried, and it was arranged that she should continue the treatment so long as was thought necessary. Strong doses could not be borne, hence the large number of applications. There was improvement almost from the beginning; by the end of the treatment her appearance was much better; she had gained weight and looked much younger. The hæmorrhages had ceased, and the periods had become normal. The tumour in the back wall of the uterus slowly diminished, and when she left it had entirely disappeared. She married in March, 1890, and when last seen was in perfect health.

CASE VI.—Small Uterine Fibroid with Profuse Hæmorrhages: Enlargement of Ovary: Disappearance of Tumour under Electricity.—Mrs. G., aged 28, was first seen in June, 1889, in consultation with Dr. Stanley Smith. Since the birth of her fourth and last child, four years and a half ago, she has never been well; always in bad health. There has been much pelvic pain and several acute attacks in the right ovary or in its neighbourhood. The menstrual losses have also been in excess. A medical friend who knew her in India, told me that he could not have believed that any one could have had such losses and have lived through them. They more resembled regular floodings that he had seen after confinements, and these were repeated every month. The bleedings came in great gushes, and never lasted over a week. For a time she made up strength so far in the intervals, but now she was less and less able to bear them. She had just returned from India, and placed herself in Dr. Stanley Smith's care; and he, judging from the quantity of blood lost, and the way it came, very properly, in the first instance, dilated the cervix and examined the cavity of the uterus to ascertain if there were not some polypus or intrauterine growth to account for these symptoms. At this time, what with having the children to look after, and one thing or another, she had great difficulty in taking almost any care of herself, and many duties devolved upon her for which she was hardly able. Unfortunately one of those acute attacks with pelvic pain came on soon after. She was very ill when I saw her, and it was not easy to make an exact diagnosis. There was evidently a small uterine fibroid, but so much general fulness and tenderness that its exact size could not be defined. To the right of the uterus—the size of a hen's egg or a little larger—was a tender swelling, which seemed to be the right ovary; the one that had inflamed on former occasions. The uterus was fixed and the tenderness of the pelvic contents was unusual. This attack confined her to bed for nearly two months. At the end of this time the right ovary was distinctly enlarged, though smaller than it was when I first saw her. The uterus was now easily defined as an abdominal tumour. She was very thin, looked small, and was miserably ill. The profuse menstruation continued, and every period sent her further downwards. Her husband, who was in the army, was ordered to the Cape. She was left behind, in the hope that she might be able to join him by the end of the year. By the beginning of October she seemed strong enough to begin the electrical treatment. This was undertaken on the condition that it would be suspended should irritation in the appendages be set up, which there seemed good reason to fear.

The uterine cavity was $4\frac{1}{2}$ inches, and there was a distinct uterine fibroid. She was unable to bear very strong doses, but the good effect of the treatment was at once seen. The

first period was much better. It commenced on November 17th, and she was strong enough to return for treatment on the 24th—a great change for her. By the 8th December there was less pain, and she was able to walk better; the swelling of the right ovary and surrounding parts was diminished, and the uterus was free. The next period was also much less in quantity. By the time she had to leave for the Cape only twenty-one applications had been made. There was a doubt if she had had enough, considering the formidable bleedings that had gone on for so long. She was, however, so much better in every way that she was advised to go. She could now walk well, was almost free from pain, and had gained flesh, while the tumour was certainly smaller. For some months she remained well, but the climate was too much for her, and she could not endure the heat. After fighting on as long as possible she was obliged to come home in November last, when I saw her again, after an absence of eleven months. She was very thin, and had fallen off very much in appearance. There had been no bleeding since the treatment was stopped. Menstruation lasted only three days, and was, if anything, scanty. There was still some thickening in the right broad ligament, but it was impossible to say what it exactly was. Certainly no enlarged ovary could be detected, and there was not any tenderness. The uterine tumour had entirely disappeared. The uterus was quite small—slightly anteverted—the os was closed and small, and the uterine cavity barely normal. She was suffering simply from the effects of the Cape climate, which to some seems to be a most irritating one. In three weeks she looked a different woman. The cold weather here set her up at once. In three weeks she gained 8 lbs., could walk any distance, and was in perfect health.

CASE VII. Long-continued Bleeding Fibroid; Cure by Electricity.—An unmarried lady, aged 39, was brought in July, 1889, by Dr. Coleman, of Wolverhampton. From its commencement her menstruation had never been right. There was always too much pain and too much loss. When 18 she was far from well, and was taken to London. She was there advised to take a complete rest for two years in bed. This she did, but with no benefit; and, as there did not seem to be much prospect of improvement, a marriage engagement was broken off by medical advice. Every possible advice was got for her; everything was tried in its turn and failed. For the next eighteen years there is not much to relate; she did not get much worse till two years ago. A woman of great strength of character, she made the best of her life, such as it was, and she strove against her continued bad health, doing her best to discharge the many duties that had, by circumstances, devolved upon her, and often trying to do more than she was able. During the periods, which came every three weeks, she was forced to keep quiet, and, though feeling ill and miserable all the time, she did not take to bed till two years ago, when she could keep up no longer. In May, 1889, she became worse, and soon after saw Dr. Coleman, who found a small uterine fibroid. About the end of June she was taken by a nurse, to whom she had spoken about the tumour, to Mr. Lawson Tait, of Birmingham. The diagnosis, given in writing, was that there was a uterine tumour of about 7 lbs., rapidly growing, and fatal to life at no distant date. Having heard of someone made well by Dr. Apostoli's treatment, she asked about this way of treatment, and was told that in her case electricity was useless; could do no more for her than if it were passed through a stone wall; that it was a dangerous and painful process, and that the puncturing needles might do harm, and that, after five weeks' treatment by electricity, it might be impossible to operate, on account of the mischief it might have done. Frightened by such strong statements, she went so far as almost to consent to come on the following week for operation, should her friends agree to this. She saw the room in the private hospital that she would have, and arranged about the fee. In spite of all this, the lady, on her way home, made up her mind not to run the risk of operation, for her life was a valuable one to two aged relatives of whom she took care, and who, with advancing years, were every day more and more dependent upon her. Thus Dr. Coleman was asked to accompany her to see us. The patient was stout, the abdominal wall very thick, and there was much general distension from flatus. The cervix was low in the pelvis, and a small uterine fibroid reached

to within two or three inches of the umbilicus. Neither Dr. Coleman, my son, nor myself estimated the weight of the tumour at more than 2 lbs. The sound passed four inches into the uterine cavity.

Dr. Apostoli's treatment was agreed to, after having her position fairly laid before her. I told her that the tumour was probably of old standing, that it was a simple growth, that but for the hæmorrhages at the periods it was harmless, that it almost certainly would not of itself shorten her days by a single hour, that we did not consider her very ill, and that any treatment—far less a dangerous operation—was hardly necessary, and, for that matter, she might, if she were so inclined, work on to the change of life without any treatment at all, as many a one much worse than she was had often to do. She had, however, got into such a state of agitation, from the opinion given two or three days before, that she might not live for twelve months, that she would not be satisfied if something were not tried for her now. So, with Dr. Coleman's full approval she remained, and the treatment was commenced without delay. And it was not for some time that she got reconciled to it. Indeed, there seemed to be a hankering after operation, and she seemed to have a fear that, after all, she might be losing time in going on with a comparatively untried treatment. About the tenth application there happened a circumstance that settled all her doubts and put her fears to rest once and for all. She heard of the death of a lady whom she had met one day at luncheon in London since the commencement of her treatment. This lady also had a uterine fibroid, which did not apparently cause her much trouble. She seemed in good health. She told our patient that the lump was a bother to her, and that, instead of taking her annual holiday at the seaside, she thought of getting her tumour removed. She spoke quite lightly of the risk. She went. It was her last holiday!

After this, the treatment went on more quietly, and was interrupted by the autumn holidays, by which time she had got thirteen applications. Her nervousness and agitation prevented her bearing strong doses of the current; the average was only 88 milliampères. The treatment was resumed on October 3rd, and other seventeen applications were made, the dose increasing to an average of 135 milliampères. Till the twentieth application she felt no benefit or improvement in herself. The good of the treatment was now felt. The tumour got smaller, and the os was high in the pelvis.

After her return home, improvement went on slowly. On February 6th, 1890, she writes that the last period came on after an interval of four weeks, and lasted for three days. It was described as the most moderate and free from pain of any during the last twenty years. Before the treatment, corsets of 34 inches were worn, now 28 inches fit very loosely. This is due to improvement in her general condition and diminution of flatulence, rather than to decrease in the size of the tumour, which was not nearly large enough to account for the improvement in the figure.

Later on, she writes: "There is no doubt whatever that the electrical treatment has been perfectly successful in my case, and I have to thank you for my present good health; for though you did not think me very ill when I came to you, the difference between then and now is indescribable. I was always in discomfort, and often in pain: now I am perfectly well, and unconscious of possessing a body."

June 22nd, 1890. "I have had nothing to do but enjoy myself, which I have done thoroughly. I feel so well and strong; it is such a change. Formerly I was always (for twenty years) so ill every three weeks that it spoiled everything; now I have no trouble at all. It is wonderful."

This lady continues well.

Thus in five of these cases the uterine fibroid entirely disappeared without the slightest inconvenience to the patient. In every case—small though the tumours were—all the ordinary treatment, however long persevered in, entirely failed to arrest hæmorrhage or to limit growth. Time seems necessary to complete the process that the current has set a-going; just as in Nature's cure at the menopause, the change is generally a slow one. After the treatment is stopped, there may in some cases be no apparent benefit, and the amount of good obtained may not be quite known for several months. Thus a young lady, a patient of Dr. Lett, of Wakefield, called on me a few weeks ago. We had not heard of her for nearly

a year, and we were afraid that she had fallen back, though there had been a considerable amount of improvement, and we looked upon her as one of the doubtful ones. She was, however, in perfect health. When the treatment was commenced, it would have been no easy matter to pick out a more bloodless face anywhere; the tumour filled the abdomen, and the hæmorrhages had gone on for a number of years. She had got fatter all over the body, yet her girth was less by seven inches than it was a year ago. Improvement in health and diminution of the tumour were still going on. Instead of using not fewer than seventy diapers at the periods, and keeping in bed, she now never requires more than thirty—still far too many. She is perfectly satisfied. She is now entirely free from pain and sickness, and never needs morphine, as she used to do. She does not think that she could possibly be in better health.

What the principle of the process may be that causes the absorption or diminution of the bulk of a uterine fibroid, I know not. In these cases it is certainly not that of electrolysis. I rather think that it must be looked for in some form of electrical osmosis.

The removal of the ovaries had been recommended in all these cases, and in some this was pressed upon the patient. No alternative was offered. The very name of Apostoli seemed to act as a red rag upon some. The treatment was invariably condemned as useless, and was generally spoken of as quackery. Not a month ago it was said to be moribund by one of the London medical journals; while one of the best surgeons in London—one from whom a fair criticism of Apostoli's work might have been expected—says that it is an utter and complete failure. All this by those who know nothing about it, and who will not take the trouble to try it. So far as I can remember, the only new medical treatment that was at once accepted by all the profession—and that, too, long before anyone knew what it was—is that for tuberculosis by Dr. Koch. Perhaps Dr. Koch's turn may be to come.

The treatment of a simple case of small bleeding fibroid in a fairly healthy woman is an easy matter, compared to the successful management of that of one whose life is at the lowest, whose nervous system is so wrecked by suffering that it resents acutely a degree of pain that in ordinary health could be borne without complaint. In these feeble-hearted, bloodless ones Dr. Apostoli's treatment is carried on with difficulty, and with interruptions. Such subjects have till now formed the majority of the cases we have had to treat. When the time comes—and come it must—when nine-tenths will be treated at an early stage, treatment will be comparatively easy, and cure will be almost always certain. There may then still be a place for hysterectomy; there will be little or none for the removal of ovaries; and gynecologists will be ashamed to publish long lists of cases where scores of ovaries are acknowledged to have been removed for simple painful menstruation that they could not, or had not, tried to cure in other ways.

The surgical treatment of uterine myoma goes on as before, and the tendency among operators—judging, at least, from what one hears—is to perform hysterectomy at a much earlier stage than has till lately been the practice. A friend of mine who was present at a hysterectomy in one of the London special hospitals a few weeks ago, heard an American surgeon indignantly remark, after the operation was over, that such an operation performed for the removal of a tumour two or three pounds in weight, in a woman 51 years of age, who had only shown symptoms for a few weeks—as he gathered from the medical man who sent in the case—was a "shame." I quite agree with him. To my way of looking at things, this is even more unjustifiable than the removal of large tumours, for which there may be some excuse. If it were necessary to remove small uterine fibroids, I think it could be undertaken with a mortality of 2 or 3 per cent., provided the method was intraperitoneal. Speaking as a surgeon, I sometimes almost regret that Dr. Apostoli's treatment came when it did, just as I seemed to be on the point of attaining to a perfect intraperitoneal method, and that was simply by removing the whole of the organ and stitching up the opening. What the present mortality of hysterectomy is I know not, for no one, save myself, has published details of cases. When these are published I would decline to accept any results, unless the weight of the tumour removed be given, along with the amount and

degree of adhesion. Hysterectomy for large, old, fibrous tumour in a broken-down woman is one thing; hysterectomy for a small tumour in a patient in fair health is quite another. The long lists of cases of operation which have been given for some years back by certain operators seemed to be framed for the purpose of giving as little information as possible.

It will be noted that in several of the cases already narrated, where there was evident enlargement of the ovary, treatment was undertaken on the understanding that it would be discontinued should irritation of the appendages be set up by it. So far was this from being the case, that not only the fibroid disappeared, but also the enlargement of the ovary or ovaries.

There has been no mistake in diagnosis since we began this treatment. By a little care, some thinking, and by not being in a hurry to make up one's mind, difficulties soon pass away, and a correct diagnosis can almost always be arrived at. To some the difficulty in diagnosing pelvic tumours seems to be great, and no doubt at first there is considerable difficulty. The rule for guidance is—and it was one that my old master, James Syme, of whom, in common with many, I ever think with great affection, used often to insist upon—that if we be in great doubt the right thing is to wait and examine the case again and again after an interval.

That a correct diagnosis be made is of the greatest importance to the patient. About two years and a half ago, a patient came from the North to have Apostoli's treatment, as a small fibroid had been diagnosed. She was seen by my son, who found the uterus normal, but both ovaries, or ovaries and tubes, were enlarged. Both swellings were about the size of walnuts, the left close to the uterus, and more like a dilated tube. She was very anxious for electrical treatment, but was warned in the strongest terms against it. It was an ordinary case of diseased appendages, but the patient was in good health, was able to take care of herself, and had, so far, had hardly any trouble. She was not ill enough to advise the removal of the appendages, though she was told that only would cure her, and that probably some day she would require an operation. This advice was not taken. She had a hankering after electricity; returned home and had it for a long time. Nothing more was heard of her till nearly two years after, when she returned a perfect wreck, and half dead after the journey. The pulse was quick, there was a high temperature, and occasional rigors. She said she did not know what pain or illness meant till shortly after this treatment was begun. The left swelling was a pyosalpinx, and contained more than a pint of putrid pus.

As progress goes on, the tendency to use the knife becomes less and less. Lithotomy has in a great measure given place to lithotrity; aneurysms are cured by rest and position; amputations for diseased joints get fewer every year; nævi of all kinds—cavernous angiomas and some forms of goitre—are now easily cured by electricity. Aneurysm of the innominata has lately been practically cured without operation by Dr. John Duncan, of Edinburgh, and he is only waiting for another case to improve upon the new departure that has already succeeded so well. Surely it is our duty to try to make fibroid patients well by a simple, safe, and practically painless process, rather than subject them to the cruel ordeal of an operation that was lately described as being the nearest thing to a *post-mortem* examination.

Dr. Apostoli's treatment is only in its infancy, except, perhaps, in Apostoli's hands, and so at this early stage we can only speak in general terms of its capabilities and powers. In the meantime, I think that it may be said that it need not be tried in cases of fibrocystic tumours of the uterus. In cases of excessive uterine hemorrhæa it seems, so far as we know at present, to fail to give permanent relief. The best results are seen in cases of small bleeding tumours. In old, large, hæmorrhagic tumours the treatment is longer than in small growths.

This treatment *almost always* relieves pain. It *almost always* brings about diminution of the tumour—sometimes rapidly. It *almost always* stops hæmorrhage—sometimes rapidly.

The results are *almost always* permanent, and the growth of the tumour, if it be not lessened, is stopped. The general health is immensely improved. By *almost always* I mean nineteen cases out of every twenty.

ABSTRACT OF THE ERASMUS WILSON LECTURES ON THE VALUE OF COMPARATIVE PATHOLOGY TO PHILOSOPHICAL SURGERY.

Delivered at the Royal College of Surgeons, February, 1891.

By J. BLAND SUTTON, F.R.C.S.,
Assistant-Surgeon to the Middlesex Hospital.

LECTURE I.

Cephalhæmatoma.—Imperforate Ileum.—Supernumerary Legs.

IN this course of lectures I propose to illustrate briefly the manner in which comparative pathology may serve to indicate errors which arise when conclusions are drawn from facts purely anthropological; also to demonstrate the way in which, as surgeons, we may become more philosophical by adopting broader conceptions of disease.

In November, 1887, Mr. Treves exhibited to the Clinical Society a lad with a large swelling on the head. He is described in the *Transactions* as a "case of cephalhæmatoma with extensive ossification of the cyst-wall." The boy was eleven years of age, and in perfect health. The swelling was strictly limited to the right parietal bone, and covered with hairy scalp. The central parts were soft, fluctuating, and the seat of feeble pulsation, but the periphery seemed to consist of a crater of hard bone firmly adherent to the skull. At the age of four months this boy fell, his head striking the floor; a bump formed, persisted, and increased in size as the boy grew. Upon these facts Treves came to the not unreasonable conclusion that the tumour was primarily a subpericranial cephalhæmatoma, a considerable portion of the wall having subsequently ossified. (Fig. 1).

In February, 1888, this lad was exhibited to the Society by Mr. Silcock, as an example of traumatic meningocele. A committee reported on the case to the effect that the tumour was probably a cephalhydrocele, "that is, a pulsatile tumour containing cerebro-spinal fluid communicating with the interior of the skull by an abnormal opening."

Fig. 1.—Boy with an old cephalhæmatoma over the right parietal bone (After Silcock.)

Thus vol. xxi of the *Transactions of the Clinical Society* contains a case twice exhibited by competent surgeons, each holding a widely different opinion as to its nature. It has long been known that a cephalhæmatoma (a collection of blood, extravasated in consequence of injury, between the