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THE

Treatment of Fibroid Tumors of the Uterus

AFTER THE METHOD OF DR. APOSTOLI.

BY

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THE TREATMENT OF FIBROID TUMORS OF
THE UTERUS AFTER THE METHOD OF
DR. APOSTOLI.¹

BY JOHN HOMANS, M.D., BOSTON.

EVERY one who has felt obliged to remove uterine tumors by laparotomy has often hesitated at the performance of the operation, and has hoped that some method would be found other than the formidable one which necessitates opening the abdomen and putting a wire around the uterus. Every surgeon dreads, at least I do, to make the long incision, sometimes more than twelve inches, to squeeze up the uterus in this coarse and cruel way. Besides this the resulting cicatrix is not unfrequently the seat of an annoying ventral hernia. When, therefore, Dr. Apostoli published and explained his treatment of fibroid tumors of the uterus by electrolysis, and gave the details of several hundreds of cases treated in this way, I hoped that a more gentle and perhaps as effectual a way of relieving those affected with these growths had been discovered.

For my own part I never have seen, and I do not see now, why the dispersing and dissolving powers of electricity should take effect on the fibroid growth and not on the skin or muscle or tendon or fat or other structure through which the current passes. When we apply one electrode within the uterus and the other on the abdomen, why should the destructive powers of the current be exerted and take effect (as we wish) on the morbid growth, and not on the normal tissues? The fibroid tumor is nothing but an aggregation of

¹ Read before the Boston Society for Medical Improvement, January 12, 1891.

normal uterine tissue in an abnormal and excessive amount, and why should this aggregation of fibre be attacked and nothing else? I was slow to adopt Dr. Apostoli's treatment, and I knew nothing about the therapeutical effects of electricity. When, however, a friend, who is perhaps the most successful hysterectomist in the world, wrote me that he had tried electrolysis, and could endorse every word that Apostoli had written, it seemed to be my duty to subject my patients to this almost harmless method instead of compelling them to undergo a dangerous surgical operation. As I knew nothing about electricity or its application, I asked my friend Dr. Philip C. Knapp to provide me with a battery and with all the apparatus called for in Dr. Apostoli's treatise written by Dr. Lucien Carlet.

I began the treatment of such fibroid cases as came to me in my private practice in December, 1887, and continued to treat them till July, 1888, and resumed treatment again in October.

I wish to say that I have followed strictly Dr. Apostoli's directions to the best of my ability. As all of my readers may not be familiar with these directions, I will state my manner of proceeding. The patient, having her abdomen bare and lying upon a convenient table, is given an antiseptic vaginal douche; then a flat, somewhat pliable and perforated metal plate, about nine inches by five, is enveloped in warm, moist potter's clay and wrapped up in muslin (like a poultice); this is then laid upon the abdomen in the pubic and umbilical regions over the tumor; after this the sound, of platinum (for silver might be melted by the current) or of gas-carbon, is introduced into the uterine canal. When this has been inserted as far as possible, a protective tube of hard rubber is shoved up against the os uteri, so that the vaginal wall shall nowhere come

in contact with the bare platinum. (for it might be severely burned). The wires of the battery are now connected with these two electrodes, that is, with the plate on the abdomen and the sound in the uterus, and the patient's hands are pressed down upon the clay. If the case is one in which there is great hæmorrhage the uterine pole is made the positive one, as the positive pole is said to exert a chemical cauterization and to stop or diminish hæmorrhage. If there is no hæmorrhage, the uterine pole is made the negative one, because the negative one is said to have a dissolving or distintegrating or dispersing effect. A rheostat, or electricity measurer, is then connected so as to allow the current to pass, and the amount of electricity passing is measured by a galvanometer and is regulated by the rheostat. It is recorded in milliampères, that is, in degrees marked on the dial of the galvanometer, each degree being an amount of electricity called a milliampère. (In recording these cases I shall use our usual mark for degrees as signifying milliampères: thus, 42° will mean 42 milliampères.) I hope I have not been too tedious in this description, and yet have made things clear. In these treatments I confined myself wholly to giving the antiseptic douches, to introducing and holding in position the uterine electrode, and Dr. Knapp turned on and regulated the amount of electricity as I directed. Later on, my nephew, Dr. John Homans, 2nd, took Dr. Knapp's place.

If this treatment by electrolysis is tolerably sure and safe we ought to practise it; if it is not so, it is a great waste of time and very tedious and useless. Again, the battery is cumbersome and expensive if trustworthy. I determined to settle the matter for myself if I could, because I thought it would be criminal to do hysterectomy if I could cure patients by Apostoli's method. I put one hundred and fifty Le

Clanché cells in the cellar of my hospital, as the simplest and best battery.

Before giving very brief reports of the cases treated, let me say that one frequent but not invaluable good effect of this treatment is the diminution or cure of pain and tenderness and an increased ability to walk and stoop. A very marked anæsthetic and tonic effect is often also produced. One of the women, who was unable to go up stairs without resting every second step, was able after a few treatments to run up two flights, and others who were unable to bear any pressure on the abdomen could wear their clothes and move with ease and comfort; but these improvements were by no means always permanent. In one instance also, chronic menorrhagia was cured, So much for the good effects of this treatment. On the other hand, pain and discomfort is sometimes produced, and hæmorrhage which has not before existed has become troublesome. One case terminated fatally four weeks after the last application of electricity; and, in the absence of an autopsy, I think the death must be attributed to septicæmia caused by the treatment.

I have sent the following circular to all the persons treated, most of whom have returned answers to the questions. These will be found (printed in small type) at the end of the description of each case.

NO. 164 BEACON STREET, BOSTON, MASS.

DEAR MADAM:

I am very anxious to learn how your health is at present, and whether you are better or worse than when I saw you. You may remember that you consulted me on . . .

Will you oblige me very much by answering the questions in the inclosed circular, and mailing the same to me in the accompanying envelope? Please add such other information as you may deem relevant.

Very respectfully yours,

JOHN HOMANS.

General state of health?
 Increase in size of tumor?
 Decrease in size of tumor?
 Monthly sickness — regular? Irregular?
 Profuse? Scanty? Painful?
 Are you stronger? or weaker?
 Has the fat over the stomach increased — that is, are you
 stouter?
 Can you walk better? Can you stoop better?
 Or is there no improvement in these respects?
 Have you pain?
 Any children born since consulting Dr. Homans?
 Have you had any treatment since consulting Dr. Homans?
 If so, what?

CASES OF ELECTROLYSIS TREATMENT.

CASE I. December 20, 1887. Mrs. P., forty-three years old. Has a hard fibroid tumor filling the abdomen to a point an inch above the umbilicus, and extending from one anterior spine of the ilium to the other. It does not fill the vagina, and the os is with difficulty reached under and behind the pubes. In 1876 she was confined with twins, and has had five abortions. She is fat and muscular, but anæmic and white. The tumor is movable, somewhat tender. Umbilical girth forty-two inches. Catamenia excessive; and there is a slight hæmorrhagic flow constantly from the uterus; at times there is flooding. A slight hæmic murmur is heard with the sounds of the heart. The tumor was discovered in June, 1886.

The interior of the uterus was curetted on October 10, 1887. The two succeeding monthly periods were slight in amount, the third, on November 22d, was very profuse, the excessive hæmorrhage lasting thirty-six hours, with a loss, as she thought, of two quarts of blood, and leaving her very weak.

On December 20, 1887, galvano-caustique, positive, 50°, eleven minutes; sound in utero three inches; rest in bed all day. On December 22d, catamenia began

painless, with slight flowing; galvano-caustique, positive, 90°, nine minutes. On December 25th, catamenia ceased, having lasted three days instead of eighteen, and instead of being terribly painful, were painless, and instead of being hæmorrhagic were normal.

December 31st, a watery-looking discharge from the uterus took place. January 28th, catamenia again normal, but more painful. February 29th, again normal, but without pain. December 27th, and 31st, galvano-caustique, positive, 90° and 135°, three minutes; sound in utero.

This case was greatly improved in regard to pain and hæmorrhage, but the growth of the tumor was not checked.

October, 1890. Health very good. Tumor a good deal increased in size. Menstruation regular; not very profuse; not painful. I am stronger. Fat over the stomach not increased. I can walk and stoop better. Have no pain. No children born since consulting Dr. Homans. Treatment for two years since consulting Dr. Homans: a patent remedy.

CASE II. Mrs. McK., housekeeper. Never pregnant. Consulted Dr. Homans many years since. Tumor very prominent, filling abdominal cavity to a point four inches above the umbilicus and two inches below ensiform cartilage; fuller on the right side than on the left, rising to within three fingers' breadths of the cartilages of the right ribs; on the left side more tender and more prominent, anteriorly rising to within two finger's breadths of cartilages of ribs at sternal angle. The tumor extends from one anterior spine of the ilium to the other, and is somewhat irregular in shape. In 1881, or earlier, she noticed a bunch in the right lumbar region, and in December, 1882, tumors on both sides; on the left as high as the navel, and on the right not as high. In the winter of 1882-83 had severe peritonitis, and took much morphine. No menorrhagia

till September, 1887. She has always had more or less pain constantly, particularly at night, but nothing like hæmorrhage. There is now (December 1887), pain and tenderness all over the abdomen, necessitating the use of a cradle to keep off the pressure of the bed-clothes. In short, the main thing has been pain in the whole course of the disease.

December 22, 1887. First, galvano-caustique, negative (puncture), 50° , eight minutes. Os high behind pubes, could be touched with the finger tip with great difficulty. The sound could not be introduced into the uterine canal. As I could not introduce the sound into the cervical canal, I punctured the tumor through the vaginal walls with a sharp steel sound to a depth of half an inch. Smart hæmorrhage followed the sound's withdrawal, and the vagina was tamponned. December 27th, patient reports that she is much more free from pain than for some months, and that she has no pain at night, and can bear pressure on the abdomen. Second, galvano-caustique, negative puncture, half an inch, 40° , seven and a half minutes.

January 1, 1888, was seized with severe pain in left leg and thigh, with swelling and discoloration. January 2d, leg and thigh swollen and painful. Temperature 100° ; morphia subcutaneously was given. In three months the leg was almost well, and the patient was more comfortable than before treatment. She could lie on her side, and could turn over easier in bed, and could walk better, and could bear pressure on her abdomen better. Her size was not larger. She declined further treatment by electrolysis.

October, 1890. I feel some better the last six months. For two years after treatment size of tumor seemed to increase: the last six months it seemed to remain about the same. Menstruation irregular, profuse for two years following treatment, painful. I feel some stronger, and am some stouter. Have been very lame for three years, result of injury; am some better. I can stoop

a little better. I have pain most of the time. No children. Have had two attacks of very severe peritonitis. I get relief, when I have severe pain, by taking a phenacetine powder.

CASE III. I will narrate this case at length, as a specimen case, and will describe the others more briefly.

Mary D., aged fifty. Two children, youngest twenty-four years old. Came to my office, December 24, 1887. She had a large, globular, symmetrical tumor, filling the abdominal cavity to a point about two inches above the umbilicus. The tumor was very prominent in the pubic region, and then diminished rapidly in size. It was about the size of a man's head, and larger on the right than on the left. The abdominal girth was thirty-six inches. She had begun to have severe uterine hæmorrhages in 1881, the flowing lasting at first four or five days, and later six or seven. Her monthly turns were very regular.

December 25th, positive pole in utero, eight minutes, 40° ; sound inserted three and a half inches. December 27th, catamenia as usual. December 29th, flowing severe; more pain than usual; in amount, patient thought, three pints. December 31st, positive pole, nine minutes, 100° ; sound inserted four inches in utero.

Flowing ceased January 3, 1888.

January 6th, negative pole, nine minutes, 120° ; sound in utero four inches.

Went home on Saturday the 7th.

January 12, 1888, negative pole, nine minutes, 205° .

January 18, negative pole, nine minutes, 150° .

Began flowing January 19th severely, so that on the 23d, the vagina was plugged. On the 24th the plug was removed and another substituted. After forty-eight hours this was removed. In the evening of January 25th a chill came on. Temperature 103° . No

abdominal tenderness; severe headache; hot douche with phœnyle. January 27th, another chill. Patient was removed to Massachusetts General Hospital. Hot douches continued. January 29th, temperature normal; tumor certainly smaller than during menstruation.

March 6th, positive pole in utero four inches, seven minutes, 140° . Since last visit has had several attacks of severe flooding, for which vagina was plugged. Has been twice in the hospital. The tumor varies in size from day to day, being at one time larger, at another smaller. March 10th, positive pole in utero five inches; six minutes, 175° . March 13th, positive pole, seven minutes, 180° . In utero five and a quarter inches. March 14th, patient feels more comfortable when lying down. Has less tightness in her bowels; formerly felt as if a rubber band was tied round her abdomen. Not so much pain. Less frequent micturition; bowels softer. March 17th, entered hospital at expected catamenial period. March 18th, flowing profuse. March 19th, flowing very profuse, and tumor swollen. March 20th, less flowing; tumor smaller. On the whole this period was one of less flowing than the last. March 21st, more flowing, and 22d still more. March 23d, flowing ceased. March 30th, positive pole, six inches, six minutes, 140° .

April 2d, positive, four and one-half inches, six minutes, 140° . April 6th, positive, four and one-half inches, six minutes, 160° . April 10th, positive, four inches, seven minutes, 175° . April 14th, entered hospital again, but the flowing was not very severe; tumor swollen. April 24th, positive, four and three-quarters inches, six minutes, 140° ; ergot after treatment. April 27th, positive, three and one-half inches, five minutes, 110° ; ergot after treatment.

May 4th, positive, four and one-half inches, 140° ; ergot. Pain in left side after treatment, remained in

bed twelve hours. Hæmorrhage at sitting checked by positive pole. May 8th, positive pole, six minutes, four and one-half inches, 140° ; ergot. May 11th, entered Massachusetts General Hospital and remained till the 18th. Flowing less in amount than ever before. May 22d, positive, 100° , five minutes; depth in utero four and one-half inches; ergot. May 25th, positive, 120° , six minutes; depth of insertion four and one-half inches. May 29th, to-day the tumor feels smaller, but it changes much.

June 21st, reports her last period better than usual, less flowing. The period in June was as bad as ever. Twenty-one treatments had now been given extending over a period of six months, and no great improvement had been noticed. In size the tumor was no smaller, and the hæmorrhage on the average, as far as I could see, was neither better nor worse. As Mrs. D. could ill afford to remain in Boston, and as the effects of the treatment were said to continue after giving them up, I concluded to let her go home and see if any good effects came on.

During the summer and autumn of 1888, I had many letters from Mrs. D., some encouraging and some not. She suffered pain most of the time, and was greatly distended in the abdomen. Occasionally morphine was required.

April 18, 1889. Treatment was resumed. The gas-carbon electrode was put in the uterus to a depth of four and one-half inches, and its position was changed by withdrawing it about an inch four times: first, five minutes, 200° , the negative pole was used as the tumor had increased in size; next 195° , and last 150° ; in all twenty-five minutes.

Patient states that she feels better after and is relieved by flowing.

April 22d, gas-carbon, withdrawn an inch at a time

four times; making five applications of five minutes each; in all twenty-five minutes, 210°. April 25th and 28th, the same.

June 6th, platinum sound in utero seven inches (it will be noticed that the depth of the uterus had increased); 220°, five minutes. Considerable hæmorrhage. Tumor was larger. I did not see the patient again till February 4, 1890. Her umbilical girth was then forty-two and one-half inches, a gain of six and one-half inches since the beginning of the Apostoli treatment, two years and a half before. In size the tumor was much larger, reaching nearly to the ensiform cartilage, and filling the abdomen almost completely. She reported that she had flowed badly in July, September, and November, 1889, and had been in bed sometimes for two weeks.

February 4, 1890. Treatment resumed. Negative pole, because the tumor had increased in size, and because the patient felt better when she flowed pretty freely. Gas-carbon electrode; twenty minutes, 160°; inserted eight inches. Quite a little hæmorrhage, with large clots.

February 7th, gas-carbon electrode, fifteen minutes; negative pole; considerable pain; 142°; slight hæmorrhage. February 11th, platinum sound, seven minutes; positive pole; no pain; some hæmorrhage; 320°. I think this is very improbable, and that the galvanometer was inaccurate, but that was what it registered. February 14th, gas-carbon; 280°, fourteen minutes; positive pole. No pain; considerable hæmorrhage. February 21st, sound in utero seven and one-half inches; positive pole, 175°, twelve minutes; slight hæmorrhage.

March 4th, sound in utero eight inches; positive pole, 210°, ten minutes. March 18th, positive pole, ten minutes, 170°; depth seven inches. March 21st,

positive pole, 320°, ten minutes; inserted six and one-half inches. March 25th, positive pole, 230°, ten minutes; depth six and one-half inches. March 28th, positive pole, 290°, fifteen minutes; depth six and one-half inches; considerable pain and hæmorrhage.

April 4th, positive pole, 270°, ten minutes; depth six inches; no pain; no hæmorrhage. April 8th, positive pole, 175°, ten minutes; depth five inches. April 11th, positive pole, 100°, ten minutes; depth three inches.

I append three letters, one from Mrs. D.'s daughter, written on September 19, 1890, and two from Mrs. D. herself, written later.

Size of tumor increased. Menstruation regular, profuse, painful. Weaker. Fat increased. I am in extreme pain in walking; cannot stoop better. There is no improvement in these respects. I have pain most of the time. No children. Treatment: Magnetic. I was suffering extremely before I left Boston, and tried Dr. Richardson, Waverley House, and it was a great injury to me; it made me very nervous. I tried another; he gave two treatments, and he relieved me very much for a while.

BIDDEFORD, ME., September 19, 1890.

DEAR SIR: Mrs. D. has been sick since the fourth of August. She has suffered more, and had more hæmorrhage than ever. She is very weak, and her heart troubles her a great deal. We don't allow any one to talk with her. She had ergot injected in her arm during her last sickness. The noise disturbs her very much. For eight days and nights she had some one to stand over her. She never can survive another sickness. She is improving very slowly now. Yours truly, N. M. D.

BIDDEFORD, October 19, 1890.

MY DEAR DR. HOMANS: I have had a very sick time since the first of August. Had more hæmorrhage and more pain, and was weaker than ever before. They had hard work to keep life in me. I did not think I should ever rally, but I have been up a week. Dr. Davis told me that I must know that I could not live long-as I was, and want-

ed Dr. Hill to make a diagnosis of my case. He came the 30th of September. He said there were too many adhesions, and I would not live through an operation. I am growing more uncomfortable every day; my feet and legs swelling more and more every day. It will be time for me to be sick the 30th of this month; and after a day or two the swelling goes down. When I *suffer too much* I take morphine. What else can I do? With gratitude,

Yours truly, M. D.

I hope I shall not have to take any more ergot; it makes me *feel dreadfully*; it makes me sick to think of it.

January 1, 1891.

MY DEAR DOCTOR: I have had no flowing in December, and I am in a very uncomfortable condition at present. Have been growing larger every day for ten days. I am in about the same condition you found me in last winter when I came to see you. After my sickness the first of November, I was left very weak; flowed six days, but I was very small. The tumor diminished every day for about three weeks, and I gained in strength every day, and I felt like a new person. I could walk and feel quite comfortable. I thought it would never trouble me again. I have not been so easy since two years last November. I diminished around the waist from thirty-nine to thirty-one inches; around the tumor from forty-six to thirty-eight inches. I feel disappointed again. Yours truly, M. D.

I have given this case at length because the treatment has extended over a greater length of time than in any other case, and because I cannot see that it has been of much, if any, use. The tumor has nearly doubled in size; the feet and legs are swollen; and the hæmorrhage, although less, is troublesome except as it gives relief. Sometimes she is free from pain, and sometimes not. She certainly has been very patient; and both she and I have given the treatment a fair trial, and without more encouragement it seems a waste of time to go on.

CASE IV. Mrs. T., forty-seven. Youngest child twelve years old. First noticed enlargement in May, 1887. Has increased rapidly in size. Tumor now (December 27, 1887) hard, extending from near the middle of Poupart's ligament on the left to a point midway between the right anterior spine and the right costal cartilage. It extends an inch above the umbilicus, and is movable. The uterine depth is three and one-half inches. First treatment, December 27, 1887; 50° , nine minutes, negative pole in utero. Second treatment, January 20, 1888. Reports that she can stoop and move about better. She had twelve treatments between December 27, 1887, and April 2, 1888. Her general health was improved. The size of the tumor was not affected, and her monthly flowing was increased.

Health fairly good. Don't know as the size of the tumor is any different, but am not bloated as I was. Menstruation ceased entirely. I am stronger; am not stouter. Can walk and stoop better; in these respects very great improvement. No pain. No children. Treatment: Have been using a patent medicine, and it has done wonders for me; have been using it since two years last July. Mrs. Pratt² recommended it to me. She has been using it longer than I have.

CASE V. Miss R., thirty-seven, librarian. Tumor hard, and extending from the pubes, which it touches, to within an inch of the umbilicus, situated more on the right side of the abdomen than on the left. First galvano-caustique, negative, January 6, 1888. Sound in utero three inches; 50° , nine minutes. The negative pole was in the uterus for eight treatments, 35° to 120° , from January 6th till April 27th. At this time she reported that she had had more profuse and prolonged menstruation, and the positive pole was substituted in the uterus during three applications, from 120° to 100° , till June 14th. After that I used the negative pole again for eight treatments. In all she

² Case I.

had nineteen applications during ten months, and was better and worse. On the whole, at the end of the treatment, the tumor did not appear either larger or smaller, and there was more flowing, but she could walk better than before taking the electricity, and had been somewhat improved by the treatment. It will be seen, however, that the tumor has since increased decidedly.

October, 1890. Health not as good as one year ago. Tumor increased in size. Menstruation regular, not profuse, nor scanty; painful; am somewhat weaker after flowing ceases. Fat not increased. I can walk and stoop better than before treatment. Have pain much of the time. No treatment since seeing you.

CASE VI. Mrs. V., thirty-six years old. No children. Catamenia regular, rather profuse. Tumor noticed a year ago. Now, February 14, 1888, it extends from near the middle of Poupart's ligament on the left, to within three inches of the right anterior spine of the ilium, and in the centre of the abdomen to the umbilicus. First galvano-caustique, negative, February 14, 1888; 60°, six minutes. Sound in the utero. Second application, February 18th. The rheostat had become wet, and when the pieces of sponge struck the water, quite a shock was given and considerable pain. Dosage 50°, six minutes. After the application she suffered pain, and was feverish. February 23d: has not felt well since last application. Uterus now fixed,

Health excellent. Steady increase in size of tumor up to last May; steady decrease since then. Menstruation regular, profuse; not painful. Am stronger; am not stouter. Can walk better; can stoop as well as ever I could. Have no pain. No children. Treatment: Dr. — has been treating me. I have been taking pills made from the enclosed prescription³ for the last six months, and have made rapid improvement during that time. Habitual discharge of leucorrhœa ceased. Monthly sickness less profuse during last six months.

³ R Ergotin, cinchonid. sulph., gelsemii rad. pulv., āā gr. i. M. One after meals.

vaginal roof vaulted; apparently there is some pelvic effusion. Treatment suspended for the present.

CASE VII. Mrs. K., forty-six. Youngest child eighteen years old. Has considerable abdominal pain and profuse monthly flowing. Os uteri much fissured, large and hard. There is apparently a fibroid growth from the right side of the fundus.

February 18, 1888. First galvano-caustique, negative, 75°, seven minutes. Sound in utero. Five more similar applications were made until April 3d, in doses from 70° to 100°. Her pain and general discomfort were much less, and her health was improved; locomotion was easier.

On April 3d, did not feel as well, and had more flowing, consequently the positive pole was put in the uterus; dosage 110°. After this the negative applications were resumed. On May 15th she reported that she felt stronger and could work better. Went eight weeks without any flowing. On May 22d reports the existence of a whitish-brown discharge from the uterus for the last fifteen days. She discontinues treatment for the present on account of the inconvenience of attending the clinic.

She had seventeen treatments, in doses of from 50° to 110° for five or six minutes, all negative but one. The relief to her pain and her increased ability to walk were marked. The tumor was unaltered in size. No answer was received to circular.

CASE VIII. Mrs. A., thirty-six. Never pregnant. Health good. Excessive flowing through the summer of 1887, and since October hæmorrhage every month for two weeks. No pain except at menstrual periods. On examination, March, 1888, uterus large, containing a fibroid in the posterior wall; os thin as paper, and neck obliterated; os admits tip of finger. Cannot walk up stairs without resting.

March 6, 1888. First galvano-caustique, positive. Sound in utero, 60° ; same dose repeated on March 10th and March 17th, when she reported that she felt better than she had for a long time, and that the flowing had entirely ceased. She can run up and down stairs.

This patient had eleven applications, positive, from March 6th to April 10th, in doses varying from 60° to 135° , for six minutes, and was completely relieved from her flowing, pain and inability to walk. A most brilliant case. Tumor somewhat smaller apparently,

March 21, 1890. Presented herself for treatment again; was well till July, 1889, when she had excessive flowing, lasting for five weeks. Has had two attacks since; has lost thirty pounds of flesh and is pale and sallow. No especial change in tumor. After four galvano-caustique treatments, of the same character as those described above, she felt better in every way; the last period was more comfortable, but the flowing was not affected. Subsequently the uterine canal was dilated, and its interior curetted and painted with iodine. After this the hæmorrhage diminished and her health improved. In this case temporary improvement followed electrolysis, but as much or more improvement followed curetting, and the tonic effect of the electricity could be obtained by a more simple method than that of Dr. Apostoli.

CASE IX. March 24th, 1888. Mrs. B., forty-eight, youngest child thirteen. In August, 1887, had some pain in right side, and noticed swelling, which steadily increased in size. Catamenia irregular; urine at times turbid and offensive. Fibroid half again as large as closed first, situated in anterior wall of fundus, somewhat towards the right. Os and neck large, thick and fissured. Uterine cavity four and one-half inches in depth. After four treatments with the negative

pole in uterus, dosage from 100° to 225°, the tumor was certainly less than half its former size, and all symptoms caused by it had disappeared. May, 1889, patient in good condition. Tumor has remained small, but menorrhagia has appeared, a new symptom.

October 4, 1890.

DEAR DR. HOMANS: In response to your letter asking for information concerning Mrs. B.'s condition since your treatment, I would say, that the menorrhagia continued for about two years subsequent; sometimes very free, and at other times not much more than an ordinary menstrual flow. The turns were irregular. The tumor during this time varied much as to size, etc. If you remember, it was reduced to about the size of a peach when she left Boston. It has since been as large as a goose egg, and this increase was accompanied with lumbar pain, cystic irritation, etc. At the present time the tumor is scarcely to be detected; indeed, since the flow ceased (now eight months), the size of the tumor has almost continuously decreased, until at present there is no trouble with it at all. The general health is better, and the cystic trouble has disappeared.

Now, doctor, whether it be a case of *post hoc ergo propter hoc*, I don't know; but I think the treatment gave the start towards recovery, and the menopause, being about to occur, helped on the amendment. Anyhow, Mrs. B. and myself are thankful beyond words to you for your great kindness.

My wife desires to be remembered, and asking you to excuse the way and manner of this hurried note,

I remain, Yours truly, ———

I cannot see that this case was very much affected. It is true the patient improved, but the menopause was the main factor in the cure.

CASE X. Mrs. D., thirty-two. One miscarriage at six months, some fourteen months ago, since when menses excessive. Fibroid, about size of small infant's head, extends to within an inch of umbilicus. Semi-

circumference of tumor covered by abdominal walls, seven and a half inches. Os points back towards sacrum, the weight of the tumor having tipped the fundus forward and the neck and os back. Uterine cavity four inches in depth.

First treatment, negative pole, April 10, 1888, 50°. Five treatments given till May 1st, dosage increased to 95°. On May 4th, seized with violent flowing, in fact, hæmorrhage, which lasted till May 10th. On May 15th, positive pole was used in utero, dosage of 90°. This repeated twice, on May 18th and 29th, each time with much flowing after treatment. Ergot, half drachm, three times daily.

Five inches is now semi-circumference of tumor, which seems to have retracted about an inch on right side, and one and one-quarter inches on left side and in the middle. Flowing: a little bright-red blood every day.

Electrolysis combined with ergot must be given the credit for having caused much improvement in this case.

October, 1890. Health good. Tumor decreased. Menstruation regular most of the time; not painful. Am stronger. Fat over the stomach not increased, but some stouter all over the body. Can walk better. Have no pain. No children. No treatment.

CASE XI. April 13, 1888. Mrs. D., forty-five. No children. Has passed the menopause. Abdomen much swollen with gas. Fibroid, size of child's head, completely filling pelvis, and pressing on rectum and urethra so as to necessitate frequent use of catheter. Sound passed three and one-half inches and negative pole used in utero. Eleven treatments given between April 13th and May 29th, negative pole, dosage from 50° to 130°. Considerable diminution in size of tumor, and entire disappearance of all difficulty in micturition.

She remained well all summer, but returned on October 9th, having been obliged to use catheter occasionally for two weeks. Tumor felt with difficulty, except by pressing deeply into the pelvis. Four treatments from 9th to 30th October, as before, dosage 95° to 150° .

In this case electrolysis was certainly of advantage, and combined with the occurrence of the menopause, has nearly cured this patient.

October, 1890. Health pretty good. Size of tumor about same. Menstruation has stopped for a year. Am stronger. Fat about same. Have never been troubled about walking or stooping. A little pain sometimes. No children. No treatment, except to have water drawn twice about a year ago. There is soreness sometimes on outside.

CASE XII. Mrs. B., thirty-four. Never pregnant. Has sensation of soreness and fulness in the lower abdomen, and feels weak. Flowed somewhat a few months ago, but catamenia as a rule regular and normal. A hard, movable fibroid, size of infant's head, extends to within one and one-half inches of umbilicus. Uterine cavity three and one-half inches deep. On 20th and 24th of April, 1888, treatments of five minutes each, negative pole, dosage 50° and 70° . On April 27th catamenia more profuse and painful than usual, lasting seven days instead of five. From May 4th to July 21st twelve more treatments, negative pole, dosage from 85° to 120° . At last treatment a well-marked papular eruption on abdomen, on the space covered by the clay. On July 22d began to flow; flowed profusely eleven days, more than ever before.

October, 1890. Health very good. Size of tumor about one-third larger I think. Menstruation regular, rather scanty, not painful. Am stronger, am stouter. Can walk and stoop better. When very tired, a heavy, distressed feeling where the tumor is. No children. Treatment: The Brinkerhoff system for rectal troubles.

CASE XIII. Mrs. F., forty-five. Youngest child

thirteen years old. Movable fibroid extending above umbilicus, with outlying knobs; fills vagina and pelvis largely. No pain.

On April 20, 1888, the introduction of the sound to the depth of two inches was followed by excessive hæmorrhage, which was not controlled by the positive pole in utero, the dose of 80° being given for five minutes. Patient remained in bed at the hospital for two days, then went home. She died of pneumonia May 20, 1888. There is no reason to suppose that the treatment was the cause of her death.

CASE XIV. Mrs. B., forty-four. One child, nineteen years old. Has known she had a tumor for eight years. Cannot stand any length of time owing to bearing-down pain. Is easily tired. Appetite and sleep poor. Tenderness at times over all the abdomen. Catamenia profuse, regular. Tumor hard, reaching to umbilicus, and from a finger's breadth from right anterior spine to within two fingers' breadths of left anterior spine.

From April 24th to June 30, 1888, nine treatments, the first four with negative, then five with positive pole; duration five minutes; dosage from 60° to 120° ; sound inserted four and one-quarter inches.

On June 30th can stand better and longer; walks better. More appetite. Tumor smaller.

October 23d, better than when first seen, but still uncomfortable. Two treatments, one with gas-carbon sound, three applications of three minutes each, the sound being withdrawn an inch between each application, dosage 155° .

January 15, 1889. General health much improved. Locomotion easier. Fat in umbilico-pubic region much thicker than before treatment. Tumor about same size, certainly no larger. Catamenia normal. No hæmorrhage.

January 7, 1890. Condition about the same, but is nervous and uncomfortable. Four treatments from January 7th to 24th, three with platinum, one with gas-carbon sound (two applications), duration ten minutes, dosage 70° to 120° .

Reported favorably November 6, 1890. Very much helped by electrolysis. Is much stronger; walks better. No flowing or pain. Always better after treatment.

Health improved. Size of tumor remains about the same. Menstruation regular, not profuse, nor scanty, nor painful. Am stronger; am stouter. No particular improvement in walking or stooping. No pain. No children. No treatment.

CASE XV. Miss W., thirty-nine. Noticed tumor two years ago. Catamenia regular. No hæmorrhage. Hard, solid, movable fibroid, filling the pelvis from before backwards, of irregular shape, extending to umbilicus and with a semi-circumference of seven and one-half inches.

From April 24 to May 29, 1888, seven treatments. Platinum sound inserted one and one-half inches, negative pole, six minutes duration, dosage 60° to 150° . On May 30th she was seized with pain in abdomen, and felt very weak. May 31st, more comfortable. June 1st, abdomen sore to the touch and on movement. Disinclined to move in bed. No appetite. Much offensive uterine discharge. Improved a little and went to seashore on June 21st.

June, 1890. The uterine discharge still exists. Tumor larger.

December 4, 1890, health good. No change in size of tumor. Menstruation regular; not scanty, nor painful; not profuse. Am stronger. Fat over the stomach not increased; am thinner. Can walk and stoop better. No pain. No treatment, nor has she taken any medicine. Is cooking regularly. Thinks the treatment benefited her,

CASE XVI. Mrs. C., thirty-four. Has been in

poor health for ten years, since the birth of her youngest child. Much pain in back, left side, and leg, headache, difficulty in walking, insomnia. Has consulted many doctors and had many different treatments. In left side of pelvis is a small hard mass, apparently connected with the uterus which is fixed, immovable and tender.

From 27th of April to 29th May, 1888, seven treatments, sound inserted two and one-half inches; negative pole, duration five minutes, dosage 45° to 60° . Patient suffered considerable pain, hence the low dosage. Walks much better. No headache at all. Pelvic induration less. Still some pain in leg.

Circular unanswered. This case does not seem to be certainly one of fibroid tumor, but electrolysis helped the patient apparently.

CASE XVII. Miss F., forty-one. The fibroid has been present for five years, has grown rapidly in last six months, and now extends four inches above umbilicus and from one anterior spine to the other. Dyspnoea. Swelling of feet. No great hæmorrhage, but menses last longer than normal.

Two treatments, April 27 and May 8, 1888. Sound inserted two inches; negative pole, duration five minutes, dosage 50° to 75° . Never returned for more treatment. Circular unanswered.

CASE XVIII. Mrs. L., forty-seven. Healthy and stout. Excessive flowing at catamenial periods. Clots come out, and then blood pours as if from a bottle just uncorked. No pain nor tenderness. Constipation. Fibroid, size of small orange, situated in posterior wall of uterus, and wedged down between bladder, uterus and rectum.

From May 21 to June 21, 1888, seven treatments; sound introduced three inches; positive pole, duration six minutes, dosage 55° to 140° . At next catamenial

period, a prolonged flowing, longer and more profuse than before treatment. Since then catamenia normal. From that time on there has been no necessity for taking as many precautions as formerly when unwell, and health generally has improved.

In this case credit must be given to the treatment for having made the catamenial periods painless and normal, with diminished hæmorrhage. Mrs. L., has not consulted a physician on account of any pelvic trouble since the last treatment in June, 1888.

CASE XIX. Miss B., forty-six. Noticed tumor two months ago. No symptom except weight and dragging down of tumor. A hard fibroid, of irregular shape and about size of small cocoanut, occupies pubic region, extends down into Douglas's fossa and thence along lumbar vertebræ to umbilicus.

From May 22 to June 21, 1888, six treatments; sound introduced five inches; negative pole used four times, positive twice; duration six minutes, dosage 50° to 70° . No appreciable effect produced.

October, 1890. Health fairly good. No change in size of tumor. Menstruation regular, profuse. No stronger, am weaker. Fat increased. Am stouter. Cannot walk nor stoop better. No pain. No children. Treatment only for my general health.

CASE XX. Mrs. S., forty-two. General history for past thirteen years, of periods of great pain in back, varied by flowing; hysteria: "nearly insane" at times; trouble in head, etc. Has consulted numerous doctors of both sexes and all schools. During these years has had two confinements, and was well for about a year at one time. Hard fibroid in posterior wall of uterus, projecting towards rectum. From May 22 to June 11, 1888, six treatments; three positive, three negative pole; sound introduced two and three-fourth inches; duration five minutes, dosage 50° to 80° .

Some slight amelioration of symptoms. Circular not answered.

CASE XXI. Mrs. F., thirty-five. Youngest child three years old. About six years ago began to flow excessively at catamenial period, which lasts ten days, the excessive flowing lasting five days. Within a year grown quite feeble, heart murmur, pallid, tongue whitish, dyspnœa on slightest exertion. An orange-shaped fibroid in anterior wall of uterus tips fundus forward. Uterus has been curetted.

From June 21 to July 31, 1888, six treatments; sound inserted three and one-half inches; positive pole, five minutes duration, dosage 75° to 105° . After second treatment had watery discharge, not offensive. At close of treatment much improved in general feelings. Catamenia much easier, flowing only three days.

Had malaria during summer, and in autumn reported "flowing same as ever." In September and October three treatments; two as above, dosage 70° to 120° ; one with gas-carbon sound changed three times, duration in all, six minutes, dosage 130° to 160° . Very much less flowing at next period.

This patient was very much benefited by the treatment, was made stronger, had less hæmorrhage, and gained in power of locomotion. I think no treatment could have been more satisfactory.

October, 1890. Health fairly good. Apparently no change in size of tumor. Menstruation regular: not as profuse as before treatment. Am stronger. Fat increased; am generally stouter. Can walk better; cannot stoop very much better; in these respects a general improvement. Pain in back, and side-ache at times. No children. No treatment.

CASE XXII. Mrs. Q., forty-two. Youngest child four years. Noticed enlargement about five months ago. Abdomen fleshy. Movable tumors extending above umbilicus on left side.

From June 23 to July 21, 1888, nine treatments.

Sound inserted five inches; negative pole, duration five minutes, dosage 35° to 185° . After second treatment much pain through back of thigh and buttock, and some days after the last treatment had had pain in limbs, was unable to stand, confined to bed. Tumor larger.

October 17, 1890.

DEAR SIR: Your communication was duly received. In reply, I need only say that my mother died December 23, 1888, never once leaving the bed after her return home from St. Elizabeth's Hospital.

Yours respectfully, J. V. Q.

It seems from this note that Mrs. Q., went to St. Elizabeth's Hospital, but perhaps the patient's daughter has confounded St. Margaret's Home, where the electrolysis was administered, with St. Elizabeth's Hospital.

CASE XXIII. Mrs. S., forty-six. No children. Considerable flowing for three years with pains in abdomen and left leg. Tense, lobulated tumor, filling abdominal cavity between each anterior spine, and from pubes to umbilicus, higher at the sides than at umbilicus. Tumor fills vagina; os pushed to one side.

On June 30th and July 3d, sound inserted with difficulty five inches; positive pole, duration five minutes, dosage 50° . Three unsuccessful attempts were made after this to introduce sound, but the patient thought she received great benefit from the treatments, although the sound had not been connected with the battery.

In the autumn, from October 9th to November 6th, four punctures, $3\frac{1}{4}$, $3\frac{1}{4}$, $1\frac{3}{4}$, 2 inches; duration five minutes, except the third time when pain was so great that only half a minute could be borne; dosage 35° , 12° , 7° , 11° to 20° . Patient became nervous. Size of tumor not affected.

Circular not answered.

CASE XXIV. Miss W. Catamenia always irregular and painful; absent from August, 1883, to January, 1884. From March to September, 1884, in bed with pelvic cellulitis. Since then difficult micturition and constipation. Life is a burden to her from pain in right side and lower portion of abdomen. This pain is accompanied by vomiting, and is much increased by walking; so for four years she has hardly walked at all. Examination under ether showed uterus small and undeveloped; ovaries normal, rather small. Uterine cavity two inches in depth. On posterior portion of fundus and neck an enlargement about the size of small English walnut; apparently a fibroid, attached to the uterus and movable with it. Has had blisters, iodine, etc., applied.

From July 3 to 28, 1888, seven treatments; sound inserted one and one-half inches; negative pole, duration five minutes, dosage 65° to 90° . At first she improved, but then the pain returned with a watery discharge. Advised to omit treatment till autumn.

In August had much pain, but then improved rapidly; and after three more treatments in October, like those described above, she menstruated for the first time since the treatment began, and, to use her own words, "Walk much better, much more comfortable, can do almost what I please. Can pump the organ, which I have not done for years."

October, 1890. Health not as good as when I saw you. Menstruation: Don't have any. No stouter. There was improvement in walking and stooping before I had this sore. Have some pain. No children.

I append a letter from her, written two years after the last treatment, showing that her improvement was temporary, and that the fibroid has very little to do with the case.

October 19, 1890.

DEAR SIR: When I left you, I could work at home, but I have never had any monthly turns since July, 1888.

Now, I cannot do anything. For the week before the Fourth of July I had an ulcer come on the outside of my bowels, on the same side the other trouble was, and it never has healed yet; but the doctor says it is doing well, so, of course, I am way back to where I was when I came to see you. My back troubles me the most, on the right side. The only way I keep my strength is by the use of ale and whiskey. My stomach is not any better than when I saw you.

N. P.

P. S. I don't know about the tumor, but have that same discharge, but don't know what it is. Dr. Fields says that he cannot stop it; so I do not know what to write, as I have not consulted with any other doctor but you.

In this case the effect of electricity was decided and beneficial, and the patient's present feeble condition is constitutional and not dependent on any especial local condition.

CASE XXV. Mrs. W., forty. An instrumental abortion sixteen years ago. Noticed abdominal enlargement six months ago. As a rule, hæmorrhage when unwell. Slight dyspnœa for years. Bowels regular, appetite poor, sleeps well. Feels weak. Anæmic looking. Has lost flesh in past five weeks. Vaginal examination shows presence of fibroids of uterus of various shapes.

From July 14 to August 7, 1888, seven treatments; sound inserted five inches; positive pole, duration five minutes, dosage 50° to 125° . At this time feels first-rate. In September reported that she had "been pretty well." Two more treatments same as above, dosage 100° . Feels well. Flowing unchanged.

It will be seen, in the answer to the circular, that the tumor has increased in size during the last two years.

October, 1890. Health: I am feeling pretty well. Tumor got considerably larger on the left side. Menstruation irregular; two months not so profuse. I have a terrible lot of pain on left side. Am stronger. Fat over the stomach not increased. Am not much stouter. I can walk better; I don't think I can stoop as well. No children. Treatment: Not until this last two months; the same as you treated me.

CASE XXVI. Mrs. H., forty-two. Youngest child sixteen years old. Excessive flowing at catamenia, increasing since tumor first noticed about two years ago. Pain in back, bowels irregular, frequent micturition. Globular, movable tumor about six inches in diameter, extending to umbilicus, with one or two projections.

Two treatments in July, 1888; positive pole, five minutes' duration, dosage 95° to 100° . Each treatment caused considerable hæmorrhage.

It will be seen, by the answer to the circular, that this patient is much improved.

Health very good. A little decrease in size of tumor. Menstruation regular. Am very much stronger; do all my own work. Fat increased. Can walk better; the more I walk, the better I feel; can stoop better. Pain: none only when I work hard. No children. No treatment.

CASE XXVII. Miss C. Noticed tumor first about eighteen months ago. Has increased rapidly in size. Some pain. No excessive flowing. Stout, strong, well-nourished woman. Hard, roundish tumor, extending from pubes to an inch above umbilicus and within an inch of each anterior superior spine. Introduction of platinum electrode very difficult, as os was behind, and in right-hand upper corner of vagina.

From September 27 to October 16, 1888, three treatments; sound inserted four inches; negative pole, duration five minutes, dosage 80° to 95° . October 20th, reports that three hours after last treatment vomited; then had considerable pain for half an hour; flowed severely for three days. October 26th, fourth treatment, same as above, dosage 150° . Fifth treat-

ment, sound inserted one and one-half inches; positive pole, five minutes, dosage 135° . October 27th, began to flow, with much pain in right side. Flowed till November 5th.

On November 6th, sixth treatment; gas-carbon sound inserted four and one-half inches; withdrawn twice; positive pole, duration in all nine minutes, dosage 115° , 120° , 130° . In the evening patient was seized with vomiting and great pain and tenderness over tumor, requiring morphine subcutaneously. November 7th, temperature 105° . November 8th, temperature 104.5° ; pulse, 120; respiration, 40-50. Vomiting ceased. Pain persists, requiring morphine occasionally. November 9th, temperature 104° - 105° ; pulse and respiration rapid. Tongue dry and brown. Diarrhœa. November 13th, condition about the same. Brandy every two hours. Takes food well; no nausea. Most marked objective symptom is the rapid respiration.

This patient died on December 4, 1888. The temperature ranged between 100° and 105° , the symptoms being those of acute septicæmia, with pain in the side, in the shoulder, and in the arm, and, later on, diarrhœa and delirium. There was no autopsy. I consider that death was caused by septicæmia, and that the septicæmia was set up by the treatment. At the same time I regret that this matter could not have been settled by autopsy.

CASE XXVIII. Miss C., forty-five. Catamenia always regular and normal till two months ago, when she flowed badly, with great pain, for a week, then had diarrhœa for two weeks, with severe pain in stomach and bowels. A rather pyramidal-shaped, many-lobed fibroid, with apex midway between left anterior spine and umbilicus.

On October 23 and 30, 1888, gas-carbon sound in-

served five inches, changed three times, duration nine and twelve minutes, dosage 110° to 150° , positive pole.

After first treatment constant discharge, offensive at first, then colorless, which continued till November 13th, when platinum sound inserted five inches, positive pole, duration five minutes, dosage 125° . November 14th, discharge ceased.

December 10th, feels well, catamenia normal, no flowing. Fundus on a level with a line drawn from one anterior spine to the other. Tumor seems smaller. Abdominal parietes fatter.

In this case the treatment by curetting, and that only once, seems to have been of much more advantage than all the treatment by electrolysis.

Health good. Change in size of tumor not noticeable. Menstruation regular. Am stronger. Fat over the stomach increased. Have got stouter from 105 pounds to 122 pounds weight. Can walk; can generally stoop better; troubled at times. Occasional pain, due usually to over-exertion. Treatment: the year from October, 1888, to October, 1889, was one of great suffering. You will, perhaps, remember on the occasion of my last visit to you, in answer to my many complaints, you advised another course of electrolysis; but remembering how I run down, during previous treatments, and your own words when you advised me to stop them, I lacked confidence to begin again. However, I grew worse, and for something over two months was very sick, four weeks of which I spent (as I could not stand the expense of St. Margaret's) in the New England Hospital, where I was most kindly cared for, and at the end of six weeks sufficiently patched up — though still very miserable — to enable me to take up my duties at the Crawford House, White Mountains, for the summer. While there, the attention of Dr. Seth Gordon, of Portland, was called to my case, who assured me he could help me. Accordingly, October 5, 1889, I put myself under his treatment, and to his skill I owe the fact, that I am a comparatively well woman.

December 21, 1890.

MY DEAR DR. HOMANS: Your letter of November 25th finally reached me, having been forwarded to me here where I am spending the winter, as I did last year. Replying to your questions regarding Dr. Gordon's treatment, will say it was simply curetting, and that only once,

and I did *not* take ergot, or in fact any medicine. I refer you to Dr. Gordon, who will, I know, give you gladly full particulars regarding my case. Please excuse my tardy answer.

Yours, very truly, J. C.

CASE XXIX. Mrs. C., forty-seven. One still-born child in 1872. Tumor noticed many years ago. Grows slowly, and causes bearing-down pains, weight and dragging sensation in ovarian region, pain in thighs. Excessive flowing, with catamenia. Uterus very movable; enlarged mostly on right side, where it extends to umbilicus; most prominent in pubic region.

In January, 1889, two treatments; sound inserted three and three-quarters inches; positive pole, duration five and one-half minutes, dosage, 45° to 55°.

October, 1890. Health not at all good. Increase of tumor; half as large again. Menstruation quite irregular, quite profuse; quite painful. No stronger; am weaker; much the same as during past year. Fat not increased. Cannot walk nor stoop better; no improvement in these respects. Some bloating and pain in abdomen of late. Pain in the legs. No children. Treatment: Very little; occasional electric treatment, but irregular.

CASE XXX. Miss S., forty-two. Catamenia for past four years have been accompanied with excessive flowing, which has been constant for past month. Several small and movable fibroids.

From May 3 to June 5, 1889, five treatments; gas-carbon sound inserted four inches; changed twice; positive pole, average duration ten minutes, dosage, 40° to 120°.

Last period before treatment required twenty-seven napkins; first period after treatment only five napkins. Feels better in every way. Circular unanswered.

CASE XXXI. Mrs. W., fifty. Catamenia accompanied by excessive flowing and excruciating pain. Has lost flesh. Cannot walk without fatigue. Apt to have pain, like that of colic, at night. Many-lobed, somewhat movable and tender fibroid, fully as large as pregnant uterus of eight and one-half months.

From November 1, 1889, to February 21, 1890, ten treatments; positive pole; five with platinum sound inserted three inches, average duration seven minutes, dosage, 100° to 175° ; five with gas-carbon sound, changed three times, average duration fourteen minutes, dosage, 70° to 150° . During the time flowed more profusely at catamenia than ever before. Pain much less. Looks and feels better at end of treatment.

October, 1890. Health about the same. Tumor not increased, about the same. Menstruation regular, profuse. Am not stronger. Fat not increased. Get tired soon. Cannot stoop better. No improvement in these respects. Have pain. No children. No treatment. I was taken sick in June at the time I was unwell, and since then my speech has been affected, so it is difficult for me to talk, and I have not felt as strong as I did before. I go out to walk every day, but tire quickly. I have been about the house since August.

CASE XXXII. Miss C., forty-four. Fibroid detected three years ago. Since then excessive flowing, averaging three weeks out of four. Clots as large as small peas. Palpitations, weakness, etc. Anæmic-looking. Good appetite. Sleeps well.

From December 23, 1889, to January 28, 1890, eleven treatments; gas-carbon sound inserted four and one-half inches and changed six times (three treatments), five times (two treatments), four times (four treatments), three times (two treatments); average duration twenty-five minutes; positive pole; dosage, the first treatment from 50° to 75° , gradually increasing till the tenth treatment, when it was from 175° to 220° . The catamenial period, which was due during this month, was accompanied with less flowing than for three years, but towards the end of the treatment she began to flow a little every day.

On February 11th, platinum sound inserted four inches, positive pole, duration ten minutes, dosage 145° .

In this case electrolysis was of advantage in enabling a school-teacher to resume her occupation, by stopping her hæmorrhages. No result could be better, and strength has been restored. A brilliant success in every way, except diminution in the size of the tumor.

October, 1890. Health very good. No change in size of tumor. Menstruation a little irregular, rather scanty, not painful. Am very much stronger. Fat over stomach not increased. Can walk and stoop. No pain. No children. No treatment. Began teaching September 3, 1890, and have not lost a day as yet. Have grown much stouter than I like to be all over. Have no bad feeling, with the exception of nausea in the morning.

CASE XXXIII. Miss W., thirty-six. Always well. Noticed enlargement in February, 1887. Since then excessive flowing, with much at catamenia. Constipation. Poor appetite. Hard, movable fibroid, size of small cocoon, nearly filling pelvis, extends half way to umbilicus.

From November 1 to December 20, 1889, nine treatments; sound inserted three and one-half inches, positive pole, average duration eight minutes, dosage from 40° to 100° .

Treatment caused considerable pain at the time, and once considerable hæmorrhage. Catamenia during treatment, flowing same, pain less. End of December had attack of weakness, palpitation, pain in bowels and general prostration, lasting week or ten days. No change in tumor.

It will be seen, in the answer to the circular, that this woman is worse in every way; the tumor is larger; her catamenial flow is profuse; she has pain; she cannot walk much; and certainly electrolysis cannot be credited with any beneficial effects whatever.

November, 1890. Health very poor, compared with a year ago. Should say tumor has increased one-half. Menstruation regular, profuse. I have a dull, aching pain at that time. I am

considerable weaker than I was one year ago. Fat increased. Cannot walk better; I walk a very little now, and standing causes pain; cannot stoop; not very much pain when I am quiet. Treatment: I received treatment from Dr. Giddings; went to his place in July; remained three weeks; then came home very much improved. At that time, that is, before I went there, I was not able to sit up very long at a time; and at present I am much better than I have been any time since being treated by electrolysis, but am far from being as well as before. The pressure in the rectum is very much less than it was when I wrote you in July; and while I am not entirely free from the catarrhal trouble, I am very much better. The treatment was manipulation — Ergotine Suppository — used twice a day. Medicine for my blood. Also tonic pills for constipation and encouragement. Manipulation, I think, was a failure, although the doctor thought he had loosened the adhesions some; however, I am much better for the course of medicine I have taken; and the doctor thinks the tumor toward the rectum must be smaller or the pressure would increase, that is, if the tumor was the cause of the first trouble. I still have dyspepsia, perhaps not so bad as when I consulted you, last November; but I am not able to walk or ride without causing pain, and I get very tired. But I hope in some way to get better, and perhaps electrolysis has done me some good, although it now seems otherwise.

CASE XXXIV. Mrs. G., thirty-two. Five children, youngest seven. Flows freely; pain in back and pubic region. Tender, roundish fibroid extends to within half an inch of umbilicus.

From January 3 to February 7, 1890, seven treatments; platinum sound inserted two and one-half inches; three positive, four negative pole; duration five minutes, dosage 40° to 95° .

At this time tumor not tender, and seems smaller: clothes loose. Feels better. This woman's strength was much improved, and the electricity acted as a tonic.

October, 1890. Health much better than last winter. Size of tumor about the same. Menstruation regular. Am stronger. Fat not increased. Can walk and stoop better; some pain, and quite sore across bowels at times after being on my feet. No children. No treatment.

CONCLUSIONS.

| | |
|---|----|
| Number of cases | 34 |
| Size of tumor unchanged | 15 |
| " increased | 10 |
| " diminished | 3 |
| " diminished, and afterwards increased | 1 |
| " not heard from | 5 |
| Health improved | 15 |
| " worse | 2 |
| " improved, and afterwards worse | 2 |
| " unaltered | 11 |
| Hæmorrhage profuse, unchanged | 3 |
| " profuse, lessened | 9 |
| " profuse, at first checked, and afterwards returned, | 1 |
| " normal, unaltered | 8 |
| " moderate, increased | 6 |
| Locomotion easier | 16 |
| " normal, unaltered | 7 |
| " more tiresome | 5 |
| Pain unchanged | 5 |
| " increased | 2 |
| " lessened | 6 |
| " not present | 16 |
| Menopause has occurred since electrolysis in | 4 |
| Died soon after treatment | 2 |
| Death caused by treatment | 1 |
| Treatment by other physicians or by patent medicines since electrolysis | 6 |
| Circular unanswered | 7 |

I have been able to put down some conditions in this table, even though the circulars have not been returned to me; so that, although there appear to be some discrepancies, in reality there are none.

Here are thirty-five cases, the subsequent history of which I know more or less about. I am aware that electrolysis has not been followed up with the persistence that Dr. Apostoli and Dr. Keith demand, but it has been pursued as long as my patience would endure without more encouragement in the way of cures.

Size of the tumor: In only two of the cases has the size of the tumor diminished, and two of these are

cases when the menopause has occurred soon after the treatment *à la Apostoli*.

The general health has been improved in fifteen cases, has been made worse in two, and death has resulted from the treatment in one.

Profuse hæmorrhage has been diminished to a normal or bearable degree in nine, has been increased in six, and unchanged in nine cases.

Locomotion has been made easier in sixteen cases, and more tiresome in five.

Pain was lessened in six cases, and increased in two; unaffected in five. In sixteen it was not present.

The menopause has occurred in four cases since the treatment began.

From this review it will be seen that we may expect, in the majority of cases, that the general health will be improved, that hæmorrhage will be diminished, that locomotion will be made easier, and that pain will be lessened; but we must almost never expect diminution in the size of the tumor, and seldom its arrest in growth. Out of thirty cases, ten increased in size, and sixteen remained the same; but the sixteen that remained the same were growing very slowly, if at all. I have learnt enough about the treatment *à la Apostoli* to know that its results are not certain enough to induce me to pursue it as a routine treatment, and that it is occasionally fatal; through the fault of the surgeon, if you please, I am willing to admit, but still once in a while fatal. If the practice of a method to be efficient and harmless requires the presence of the inventor as well as his apparatus, then its beneficial effects can only be experienced in the presence of the inventor, and patients must go to him. Such a method can hardly be of general use. Dr. Bigelow's litholapaxy, for instance,

can be practised by any intelligent and competent practical surgeon with almost as good results as if practised by Dr. Bigelow himself; but electrolysis for fibroids, *à la Apostoli*, has not been as encouraging and efficient and harmless in my hands as Dr. Apostoli's books would lead me to suppose it ought to be. I have hardly used my battery during the past year.

From December, 1887, when I began the practice of electrolysis, *à la Apostoli*, I have operated by abdominal section fifteen times for the removal of uterine fibroids, with fourteen recoveries. So that it may be inferred that I have found nothing sufficiently curative in electrolysis to make me lay down my knife, and never take it up.

In conclusion, I wish to thank Dr. Knapp, and my nephew, Dr. John Homans, 2nd, for their help in preparing for the treatment and in carrying it on. I had intended to have looked up all the cases that I have seen during the last three years, particularly those who have received no medical or surgical treatment; but the amount of labor and correspondence required has prevented my accomplishing this work, which I hope, however, is only postponed.

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