

IRISH (J. C.)

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BY ABDOMINAL HYSTERECTOMY.

BY

J. C. IRISH, M. D.,
LOWELL, MASS.

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TREATMENT OF UTERINE FIBRO-MYOMATA BY ABDOMINAL HYSTERECTOMY.

BY J. C. IRISH, M.D., LOWELL, MASS.

THAT there are some cases of uterine myomata, in the treatment of which hysterectomy is our only resource, very few will question. But we shall find a very wide divergence of opinion as to the extent or frequency with which this operation for radical cure should be advised or is justifiable.

The high rate of mortality that attended abdominal hysterectomy for fibroids, until very lately, explains in part the small degree of favor still accorded by many to the operation. Again, a just estimate of its value and necessity is prevented by some vague and erroneous notions as to the progress of myomata, the suffering they cause, and the fatality that attends them. Thirdly, certain palliative modes of treatment are offered as substitutes for hysterectomy, which are claimed to be so efficacious as to obviate all necessity for the latter operation, except in very rare instances.

Therefore, in considering the treatment of uterine fibroids, we have the radical method, hysterectomy, to compare with the palliative methods, namely, removal of the uterine appendages, electrolysis as taught by Apostoli, and the treatment of the endometrium by medicinal applications and the curette (this third method being directed to the relief of that prominent symptom, hæmorrhage).

But before making any comparison between the treatment for radical cure and that for palliation, an inquiry as to the tendency and natural history of these



abnormal growths will aid us very much in assigning to each method its relative and exact value.

The different terms, fibroma, myoma and fibromyoma, used in describing these tumors of the uterus, indicate no very marked distinctions from the standpoint of the pathologist. Histologically they are composed of unstriated muscular fibre and connective tissue in varying proportions, precisely as is the uterine structure, and they differ from the latter merely in the relative proportions of the two kinds of tissue.

Upon this subject, Dr. Gusserow says:¹ "If the tumor represents mainly a simple hyperplasia of uterine tissue (such as is normally witnessed in pregnancy), there is a preponderance of muscular over connective tissue-elements. In that case, the growth approaches the type of pure myoma. On the other hand, if from the very incipience of the new formation the connective tissue predominates, or if it does so secondarily, by a process of fibrous induration, the muscular tissue being held in abeyance, as it were, we get an almost pure fibroma. Nevertheless, it would not be in accordance with histological principles to divide these tumors into myomata and fibromata, since, as already stated, both varieties of tissue invariably coexist in them."

A separation of uterine fibroids into two classes was made by Mr. Tait in 1874. The one he designated as "soft œdematous myoma," the other, as "nodular myoma." This classification in one way is as objectionable as the preceding, for there is no distinct line of division between the soft and the hard myomata. Clinically we find them all the way from those that have the hard feel of a rock and cut like cartilage, to those that are so soft that they give a doubtful sense of fluctuation through the abdominal walls, and upon

¹ *Cyclopedia of Obstetrics in Gynecology*, vol. ix, p. 166.

section have very much the appearance of lipomata. In another way this division is important, for in many instances it is possible to distinguish the very soft myoma from the firm nodular one. The former variety is more richly supplied with blood; its growth is usually continuous, rapid and unaffected by the menopause, while it is more liable to dangerous degenerations than the latter. Therefore, the recognition of a soft myoma, as will be shown elsewhere, will modify greatly our prognosis and treatment.

Making use for the moment of that somewhat arbitrary division of uterine fibroids, with reference to their direction of growth, into subserous, interstitial and submucous myomata, we shall omit all consideration of the last class. They are pedunculated growths in the uterine cavity, and their treatment by removal through the vagina is established beyond all question. The same is true of a portion of the interstitial growths. Those that invade mainly the cavity of the uterus can best be reached by the same route as the submucous, and removed by enucleation. Therefore, one of these classes, the submucous, and a part of the second class, the interstitial, need not further engage our attention with reference to treatment.

The fact seems well settled, that the development of these neoplasms never begins before the establishment of the menstrual function, nor after its cessation. Still I have seen one case in which a rapidly growing fibroid was first found many years after the menopause; and I think several other similar examples have been recorded. Yet it is very probable that these tumors may have begun during the menstrual life of their possessors.

They commence in the muscular or connective tissue structure of the body of the uterus, exceptionally in the cervix, and, as a rule, grow very slowly at first.

They are single growths in about one-half the cases, and in the other half, multiple. The multiple fibromata, or multinodular, as Mr. Tait calls them, are much more likely to grow slowly and never to reach any very great size, and to complete their growth at or before the time of the menopause. They are almost certain, at an early period of their existence, to give rise to menorrhagia. For the rule is that one or more of them will extend towards the uterine mucous membrane and produce in it those changes that are usually the cause of hæmorrhage. The single fibromata generally grow more rapidly and oftener in the direction of the abdominal cavity. Like the multiple fibroids in the early period of their progress, they cause profuse menorrhagia. But as they ascend into the abdomen and become, as often happens, more or less pediculated, the hæmorrhage becomes less, or entirely ceases. There are, however, frequent exceptional cases in which the menorrhagia continues when the subserous fibroma has a location somewhat remote from the endometrium. This symptom is then probably due to a general hyperæmic condition of the uterus.

It is not a very unusual occurrence in cases of multinodular myomata for one of them to advance steadily and invade the abdominal cavity, while the others remain stationary in size. The case then becomes one which practically follows the course of single subserous myomata.

In tracing the natural history of uterine fibromyomata, the one question of paramount importance that arises, is this: Are we dealing with a self-limited disease? That is, does the development of these neoplasms end with the establishment of the menopause? Again, if their growth does stop at this time, a second question presents itself, as to what extent

their after-history of retrogression is free from suffering or danger.

The mode of treatment, whether palliative or radical, that should be chosen, will depend greatly upon the answers to these questions. The first one has been answered so often and so positively in the affirmative, that it never has occurred to any one to question or investigate the correctness of the answer. It has been laid down and accepted as a rule, that the progress of uterine fibroids of all classes ended with the cessation of the menses, and that, after that time, they gradually disappeared or diminished in size, or at least, became harmless. The exceptions to this rule have been regarded as so rare as to merit but little attention.

Mr. Tait, however, says of the "soft œdematous myoma": "It is no regarder of age. The largest I ever removed—over sixty pounds—grew almost entirely after the menopause; patient's age, sixty-three." He further remarks that the hard, multinodular myoma is a disease of menstrual life, and the soft, œdematous myoma certainly is not; that is, Mr. Tait makes an exception to the rule in the latter class of myomata, whose relative frequency is certainly great enough to go a long way in invalidating it.

The observations that my own small experience has permitted me, are in accord with those of Mr. Tait in regard to soft myomata and small multiple fibroids. But in three instances I have removed by abdominal section nodular fibromata, that were growing rapidly at a period of from one to three years after the menopause had been completely established. In another case I attempted the removal of a large fibroid in a patient sixty-nine years of age, because it was growing very fast, and had doubled in size within the preceding two years. This tumor could not be classed as a soft nor as a hard nodular myoma. In density of

structure it seemed to be about half-way between the two.

Of sixteen abdominal hysterectomies that I have made, I have operated in seven, after the time of the climacteric period, either because the tumors were growing or were otherwise dangerous to the life of the patient. Thus of my sixteen cases, one-half of them lacking one, developed the formidable symptoms necessitating hysterectomy after the menopause. This seems to me a sufficient answer to the second question, namely: Do uterine myomata become harmless when the climacteric is passed? Therefore, from the facts that have been given, I submit that the rule, that the development of uterine fibro-myomata ceases at the time of the menopause, and that ever after they become innocuous, has so many exceptions that it becomes almost valueless as a guide to treatment.

I do not for a moment doubt that most of the hard-multiple myomata and many of the small single ones, particularly those that have existed for a long time, complete their development with the advent of the menopause, and afterwards entirely disappear or become much diminished in size, and of no further inconvenience to the patient. On the other hand, I am very certain that those subserous and interstitial myomata, whether soft or hard, that have attained already a considerable size and have encroached to quite an extent upon the abdominal cavity, are not much influenced in their progress by the cessation of the menstrual function.

Furthermore, a careful study of the natural history of uterine myomata in a large number of cases, cannot fail to convince one that the three or four years preceding and following the menopause are especially disastrous to patients suffering from this disease.

Out of sixteen hysterectomies by abdominal section

ten of them became necessary during this period. Keith, a few months since, published a book in which he reported 106 cases treated by electrolysis. Omitting from this number twelve, in which the existence of a fibroid was doubtful or in which it was submucous, we have remaining 94 cases; 43 of these, or almost one-half, first went to him for treatment between the ages of forty-two and fifty inclusive.

According to a table of 798 cases prepared by Schröder,² 407 of the number, or fifty-one per cent., first sought medical aid between the ages of forty and fifty.

Again, the method of treatment to be selected will depend, to a considerable extent, upon the severity of the disease, the amount of suffering, and the infirmity it occasions, and the danger to life with which it is attended. There can be no doubt of the very frequent occurrence of uterine fibromata; and that in quite a proportion of cases no serious inconvenience results, and no treatment is necessary. But we have no reliable data upon which to base any conclusion as to their frequency; nor are we interested in that indefinite number that do not require treatment. What will be said, therefore, of the seriousness of the affection, will have reference only to that class of cases in which some kind of treatment is indispensable.

Passing in review as hastily as possible some of the symptoms, complications and degenerations attendant upon fibroids, that constitute their gravity and danger, we have first, hæmorrhage and pain. Both occur, as a rule, with interstitial tumors, and exceptionally with the subserous. All will agree that both are prominent factors in making invalids of patients with myomata, just in proportion to their severity and persistence.

² Krankheiten der Weiblichen Geschlechtsorgane, Leipzig, 1884, p. 216.

Pressure within the pelvis upon ureters, bladder and rectum, often gives rise to very serious symptoms other than pain. Both interstitial and subserous fibroids, on account of the great size they attain, frequently become a distressing and dangerous disease. Parenthetically, it may be said of these large tumors that they have formed adhesions to surrounding structures, especially the omentum, and thence derive a rich blood-supply. In eight laparotomies that I have made for myomata that nearly filled the abdominal cavity, this condition existed.

As complications, I have in four instances found cystic ovaries; and in one, pus in the pelvic cavity, probably from a ruptured pyosalpinx. Dr. Wyllie² says, "In the majority of cases in which I have removed the tubes and ovaries to stop the growth of fibroids there has been salpingitis, and in many of these I have found large quantities of pus in or about the tubes and ovaries." Mr. Tait also says that in a large number of operations he found the myoma complicated by double pyosalpinx.

Most important of all are the degenerations to which these growths are liable. The whole class of so-called fibro-cystic tumors of the uterus are, undoubtedly, degenerate myomata. They sometimes suppurate, and contain pus cavities. Their structure becomes necrotic, wholly or in part, from interference with the blood-supply; or softened and broken down, from the effects of inflammation or serous effusion. It has been demonstrated, too, beyond all question, that they degenerate into sarcomata. Under these circumstances the uterine fibroid becomes as certainly fatal as a degenerating ovarian cystoma.

The observations of Dr. Martin upon this subject,

² Transactions of the American Gynecological Society, vol. xiv, p. 119.

as quoted by Dr. Cushing, have so important a bearing that I append them: "Of the 205 myomata of the corpus, therefore, only ten showed pronounced conditions of involution; 32 were undergoing a transformation which must be designated as very serious for the women afflicted with them; six were malignant degenerations; and nine showed a fateful complication with carcinoma. If we leave the latter cases out of consideration, as being accidental complications, the fact remains, that yet 38 out of 196, or out of 186 (if we subtract the cases of involution of the tumor), 38, that is, 20.4 per cent. showed changes, which certainly represented the opposite of that which was called benign."

If this brief and very imperfect presentation of the development and complications of uterine fibromata be accepted as substantially correct, it must be concluded that we are considering the treatment of a disease, that is not self-limited, and that is formidable and dangerous both to the health and life of the woman thus afflicted. For the management of this grave affection we have, on the one hand, as has already been said, the radical method of treatment, hysterectomy, and on the other, certain palliative methods. First among the latter stands Tait's operation for the removal of the uterine appendages; the object of which is two-fold, first to arrest hæmorrhage by inducing an artificial menopause, and secondly, to stop the growth of the tumor. In those cases where the myoma is small, and where hæmorrhage is a prominent symptom, and is likely to continue to be so for several years, this operation is especially indicated. Also when the growth is recent, small, and steadily growing, and the patient is young, it so often completely terminates the affection, so far as any further symptoms are concerned, that it becomes a resource of treatment of very

great value. When employed in the limited range of cases that I have indicated, removal of the uterine appendages has rarely failed to relieve the hæmorrhage, and has usually been successful in arresting the growth of the tumor. In spite of some failures, its measure of success has been great enough to make it a method of treatment with which we could not well dispense. But when uterine fibromata (subserous and interstitial) have reached a large, or even medium size, and have extended considerably into the abdominal cavity, removal of tubes and ovaries becomes a very difficult, and sometimes an impossible operation. In comparison with hysterectomy, it is fully as formidable and dangerous. At the same time it is merely palliative. It is true that it may stop hæmorrhage, but this is a serious matter only exceptionally in these cases. Again, it often fails to arrest their growth, and certainly fails to remove the other attendant dangers of degeneration, that are a constant menace. Therefore this operation can, in no way, take the place of hysterectomy. It rather supplements the latter, in that it is especially applicable to small bleeding fibroids in young patients, where hysterectomy would be particularly difficult to do, and would be a procedure of greater danger than the existing gravity of the disease would warrant.

The second palliative mode of treatment that we have to compare with the radical, hysterectomy, is electricity by the method of Apostoli. Some of the advocates of this treatment, notably Keith, have claimed for it, in the cure of fibroids, an efficacy so great as to obviate all further necessity for the operation of hysterectomy. Apostoli himself, however, has never made for it any such claim. I have never made trial of Apostoli's method, and therefore know nothing of it from actual experience. So I am forced to

draw my conclusions in regard to its value, and consequent relation to hysterectomy, from the testimony of others. Fortunately there is no lack of witnesses; but unfortunately, the evidence they give is conflicting almost to contradiction. Keith, in the publication referred to above, reports 106 cases treated by him with electricity, but does not give any summary of the results of his treatment. Yet following through the cases in detail as recorded by this writer, it would appear that electricity, often after a long-continued use, relieved the hæmorrhage in most cases, but failed to do so in some; that a few very small tumors were made to disappear entirely; and that many others were diminished somewhat in size. This diminution, however, was noted principally in those that did not extend to the umbilicus. For the most part, there was no decrease in the size of the larger ones. Mr. Keith lays special stress, in reporting these cases, upon the claim that most of these patients felt better after the use of the electricity than before; they suffered less pain, and were less invalids. In one instance the treatment gave a fatal result. In several very successful cases the existence of a tumor, to say the least, was doubtful.

Dr. Chadwick,⁴ after reporting the cases in which he had employed Apostoli's method, says: "It will be seen from these brief records that the only favorable results were in diminishing menorrhagia (Cases I, V), and once (Case III), in temporarily relieving dysmenorrhœa. In no case did the fibroid decrease, during or subsequent to treatment. In three cases (II, X, XI), metro-peritonitis was caused, one of which terminated fatally. In one case (IX), septicæmia set in, resulting fatally. In two cases (VI, VII), menorrhagia was increased. With the experience that I have

⁴ Transactions of the American Gynecological Association, vol. xiv, pp. 132, 133.

had, I feel warranted in insisting that the method is a dangerous one; that its claims to diminish the bulk or even arrest the growth of fibroids is questionable and unproved. Its alleged effects in arresting hæmorrhage of the uterus, through its caustic action upon the lining membrane of the uterus, has à priori considerations and a preponderance of experience in its favor. Whether it is the safest and most efficient agent to achieve this end, seems to me open to question."

Dr. Homans says, "The curative action of the electrolysis *à la* Apostoli, is very problematical, and it hardly even diminishes the size of the tumors."

Dr. Martin, of Chicago, says, "Fibroid tumors of small size can be completely absorbed by the proper currents of galvanism."

Dr. Doléris, of Paris, through his assistant, Dr. D. Angel Villa, says, "After a thorough and extended trial of Apostoli's methods, no disappearance or marked diminution of the tumors was noted."

In the summary of a report of thirty cases treated by the method of Apostoli at St. Bartholomew's Hospital, the operator concludes with the following words: "The results of the cases reported are not as brilliant as could be wished, and the treatment is not entirely free from danger, as shown by the fatal case; but compared with other methods, it is probably the best short of actual removal by operation. Whether the advantage, which is small, is worth the extra trouble and time involved, it is difficult to say. This point can possibly only be decided by reference to the circumstances connected with each case. It would seem that Dr. Apostoli has not found it so uniformly successful as he at first believed, for he has recently advocated the treatment of uterine fibroids by the interrupted current. The tumors do not decrease much in size, but in the thirty cases only two have increased. Hæm-

orrhagic myomata are those most favorably influenced by the treatment."

Whatever else the above testimony may show, it incontestably demonstrates (even that portion of it most favorable to this method) that electricity is no direct substitute for hysterectomy. It has signally failed, even as a palliative procedure, exactly in those cases where the radical operation is indicated, namely, the very large interstitial and subperitoneal tumors. In short, whatever value it has, is shown principally in the treatment of small bleeding myomata, precisely as is the case with the first palliative removal of the uterine appendages. The only way that either of them can be claimed in any manner to restrict the application of hysterectomy in the treatment of fibroids is by stopping the growth of small tumors, and thus preventing the necessity of the latter operation at some future time.

There remains to be mentioned as briefly as possible the third palliative method — use of the sharp curette for treatment of the endometrium. This procedure is directed solely to the relief of hæmorrhage, and is usually successful when the uterine cavity is not too much distorted to prevent the operation from being thoroughly done. It is a more reliable means of treating menorrhagia than electrolysis. It may also, with advantage, take the place of the comparatively grave operation — removal of the uterine appendages — when hæmorrhage is the principal symptom requiring treatment.

Finally, abdominal hysterectomy, the treatment for radical cure, remains to be considered. From our deductions in regard to palliative methods, it follows that this operation, in large interstitial and subserous myomata, is our only resource. That the disease is one of very great gravity with reference to the health

and life of the patient has, I think, been clearly shown. In view of this fact, has the danger of the operation become sufficiently small to warrant its general employment in these cases? The operation may be said to have commenced its legitimate existence about the year 1865. During the following twenty years, that is up to 1885, there was something over six hundred recorded cases of laparotomy for the removal of uterine fibroids, with a mortality of about thirty-three per cent. This great fatality is partly explained by the fact that these cases represented the early experience of the operators, but in much greater degree by the additional fact that most of them were simply operations of last resort. And from this, we may again infer that a fatal tendency often attaches to uterine myomata. The results of hysterectomy during this period are not at all surprising when we recall that the death rate of ovariectomy was almost as great when it occupied a similar position as a last resort procedure. The great fatality of the operation, which prevailed until lately, explains also the eagerness with which any palliative means of treatment was welcomed by surgeons, and the exaggerated praise accorded to it in every supposed case of success.

Since 1885, and especially during the past two or three years, the operation has made very rapid progress in point of success. While it had a fatality of thirty-three per cent. five years ago, now the proportion of failures has become so small in comparison, that the advisability of hysterectomy in any given case has become an entirely different question. The percentage of success that is attained at the present time can only be approximately determined.

My own cases of hysterectomy are too few in number to be of the least value, so far as their percentage of deaths or recoveries is concerned. My last six in

succession have recovered. Looking back over the failures of my earlier work, and seeing how many of them were due to preventable causes, I feel very certain that in the future my unfavorable results after hysterectomy will not exceed ten per cent. Dr. Homans has recently reported ten successive recoveries.

In a total of about one hundred cases, Dr. Bantock has had not far from a ten per cent. loss. His later operations, I believe, give a mortality considerably less than this. On the whole, it is probable that ten per cent. approximately represents the present mortality of the operation.

Again recurring to the many dangers that attend the large interstitial and subserous fibromata, and recalling the many ways in which they kill, and especially (of the several degenerations to which they are liable) those of malignant character, that Dr. Martin found in twenty per cent. of 186 cases, I feel warranted in insisting that hysterectomy, which entirely cures nine out of every ten of the patients, is urgently indicated. I claim, too, that apart from the dangers mentioned, the operation, with its present small fatality, is perfectly justifiable for the cure of the hopeless physical and mental suffering that these large tumors often inflict. When its mortality is still further decreased by its prompt employment, and, by the consequent elimination of many cases that have become desperate by delay, abdominal hysterectomy will take its place among the great surgical procedures of the half-century, second only to ovariectomy in its brilliant success.

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