

THE TREATMENT OF FIBROIDS*

BY F. B. MOWBRAY, M.B., F.A.C.S.

*McGregor-Mowbray Clinic,
Hamilton*

UNTIL further research reveals something more definite as to the causative factors underlying the development of fibro-myomata of the uterus, it is unlikely that efficient preventive measures will be devised. In the meantime, we are confronted with the problem of dealing with a condition where our treatment at its very best is directed toward protection of the patient against the injurious effects of these tumours. By no means are all fibroids of the uterus injurious, but a certain proportion of them sooner or later bring about a distinct disturbance

of function, while a small percentage will actually end fatally. The autopsy statistics of Hoffman show that 27.9 per cent of all women over 35 years of age have fibroids. It is thus very evident that this is a condition always to be considered, and frequently to be dealt with.

In the symptomless fibroids we are not particularly interested, except to say that we do not believe that radical measures should be adopted just because a fibroid is accidentally discovered. There is an exception to this statement, to be found in the nervous type of patient, who has come to learn that she possesses a fibroid, and whose intelligence is such that she will be un-

*Read at the Canadian Medical Association Meeting, Toronto, June 17th, 1927.

happy in knowing that she has a tumour, even though no symptoms were ever present.

Fibroids requiring treatment may be roughly divided into two classes, (1) Those which may be treated by irradiation, either by radium or roentgen ray; (2) Those best treated surgically.

In reading the literature on the treatment of fibroids, one cannot help being struck by the differing opinions expressed as to the cases suitable for radiation as contrasted with operation. The enthusiastic radiologist points out the dangers of surgery, and would have one believe that radiation-therapy is the only safe and satisfactory method. Other writers are much more in favour of surgery, leaving to radiation only the cases in which there is some grave contra-indication to surgery. I am inclined to believe that the correct position is somewhere between these extremes. It is as ridiculous for anyone to insist that radiation therapy is always safe and never followed by morbidity, and sometimes mortality, as for the surgeon to contend that operation is always free from danger. There is a certain mortality, which is unavoidable in any major surgical procedure, and although it may be kept at a minimum, nevertheless it is always present. Exactly the same holds for radiation-therapy, as shown by the following case history:—

Miss A. Treatment for fibroid began in January, 1923, and was given, according to standard technique, every three weeks for four months; when the patient began to feel weak and the treatment was given only every five weeks. The patient's condition then improved, and she appeared to be doing well until three months later, when she developed a burn on the abdomen and right inguinal region. This large indurated area gradually broke down and formed a large sloughing ulcer, very painful, and difficult to heal. On three occasions she developed erysipelas, from which she made good recoveries. In 1926, while the burn was still not completely healed, she again developed erysipelas from which she did not recover. Her total stay in hospital was 838 days.

Our first duty in determining treatment must be to decide whether our patient shall be treated surgically or by radiation. This decision, aside from the actual type or condition of the fibroid, is necessarily dependent upon other factors, principally other pelvic conditions, such as lacerations, erosions, adnexal disease, or the possibility of early malignancy, as well as the general condition of the patient. As a rule, I think that no patient under 40 should be subjected to irradiation, unless very grave complications render surgery unsafe. In a study of 250 cases treated surgically, Ford reports 11 cases of unsuspected adeno-myomata, 4 cases of carcinoma of the ovary, and 1 of sarcoma of the uterus. There were 31 degenerating myomata, while 40 per cent of the cases showed

some chronic pelvic inflammation. Studies of another series of patients, in whom irradiation had been done, revealed the fact that 18 per cent required further radiation, while 13.7 per cent were later treated surgically, as compared with 4 per cent in the surgical group which required further treatment.

The presence of infection in the cervix or adnexa is a most important factor in deciding against radiation and in favour of surgery, and in deciding the type of operation. The choice of operation is important, once surgical treatment has been decided upon, and, aside from the character of the local lesion, must depend upon the age of the patient and her desires regarding motherhood.

In order to exclude carcinoma of the fundus in all cases of uterine hæmorrhage with tumour formation, writers of the widest experience advise a diagnostic curettage before *any* treatment is undertaken. Unless there are distinct contra-indications to operation, it is generally held that surgical treatment is preferable in patients who may still expect to bear children.

We, at the McGregor-Mowbray Clinic, have had the advantage of having radium, x-ray, and surgery equally at our disposal, and, therefore, have not been tempted to operate on patients, rather than irradiate them. We feel that both types of treatment have a distinct field, but that one should not indiscriminately treat all fibroids by either method to the exclusion of the other. Radiation has not the wide scope that some of our radiologist friends are apt to believe, neither should this valuable means of treatment be relegated to the discard by surgery. In patients of 40 years or over, whose nervous systems are stable, I believe we should radiate cases in which hæmorrhage is the prominent feature, and in which tumours range in size from small myomatous nodules up to freely moveable ones as large as a three months' pregnant uterus providing these tumours are not sub-mucous, pedunculated, degenerating, or rapidly growing, and that the uterus is otherwise normal. Radiation is usually contra-indicated wherever there is any suspicion of pelvic infection or adnexal disease. This is the case in 40 per cent of fibroids. Patients of the operative class, where operation is dangerous on account of other serious constitutional complications, are also better treated by radiation, because some improvement may be expected, even if the ideal cannot be attained.

The roentgen ray is probably dependent for a

great deal of its curative power upon its effect on the ovarian function. Some contend that radium also acts in the same way, but to me it seems that radium inside a uterus is less likely to produce a profound effect on the ovaries than is roentgen radiation from which they cannot be protected. Roentgen radiation is inadvisable in patients of nervous temperament, as a premature menopause may be very distressing.

Whether x-ray or radium shall be the method of choice depends largely upon circumstances. X-ray is certainly easier to apply and may cause the patient less inconvenience, but a more prompt cessation of bleeding can usually be obtained by the use of radium. Not only is cessation of bleeding apt to be more prompt in properly selected cases, but the effects on neighbouring organs is much less. The dosage should be the minimum amount which will bring about the desired result. With radium inserted in a capsule, so heavily screened as to eliminate practically all but Gamma rays, placed in the uterine cavity well up into the fundus, and left in position long enough to deliver 600 to 900 mgm hours, this form of treatment is probably nearest the ideal, and quite sufficient in the majority of cases. The roentgen ray may produce the same effects, but in doing so one cannot prevent the neighbouring organs from being influenced. This radiation of other organs is not always without danger. It is a mistake to believe that radiation is a harmless and conservative means of treatment. Masson says "The fact should not be lost sight of that a surgical operation is often a more conservative form of treatment than the administration of even a small dose of radium or roentgen rays." W. J. Mayo says, "Radium must justly be considered in selected cases as a competitor of hysterectomy, but it has no comparative standing in cases suitable for myomectomy."

The cases suitable for surgery are broadly speaking:—

- (1) All patients under 40 years of age, and those over 40 unsuited for radiation.
- (2) All submucous fibroids or other pedunculated tumours.
- (3) All fibroids in which adnexal disease or inflammation is present.
- (4) Uteri in which any pathological lesion, other than fibroids, is present. This must include lacerations, erosions and degenerations of the cervix, together with carcinoma of the body of the uterus.
- (5) All tumours causing pain or pressure, or multinodular tumours filling the pelvis or lower abdomen, especially those interfering with urinary function.
- (6) Where there is reasonable doubt as to the nature of the tumour, or where some other serious complication is present.

Having decided upon surgical treatment, we are again confronted with a choice in procedure, and one must choose between myomectomy, subtotal hysterectomy, and total hysterectomy.

MYOMECTOMY

Myomectomy is an operation which gives excellent results, and in the hands of good surgeons the mortality is about the same as in hysterectomy. It has limitations, but I feel that it has a much greater field of usefulness than it is credited with. It should always be considered in patients under 40 years, and I feel should be the rule in all cases under 30. Keith Murray reports that 85 to 90 per cent of patients menstruate normally, and that 28 to 30 per cent conceive after myomectomy. A single subserous or intramural growth is the ideal type for this operation, but multiple growths may safely be removed. Myomectomy may frequently be done on a pregnant uterus without interrupting pregnancy. The abdominal route is the most satisfactory, except in submucous polypi. Degeneration of a fibroid, whether it be red, gray, or calcareous, is no contraindication to myomectomy provided careful technique is observed.

Myomectomy is not advisable in the presence of severe anæmia, nor in women past the menopause, unless operation is very simple. It is contraindicated in the presence of tubal inflammation, and in any case of multiple fibroids so situated that the operation may be too prolonged and attended with extreme shock. Acute infection in a fibroid may be a contraindication, especially if the fibroids are multiple. A chronic infection, in which the patient has had time to develop immunity, is not a barrier to myomectomy. The operation is more tedious, more difficult, and perhaps occasionally more serious than that of hysterectomy.

The best time to operate is immediately after a period. Make the incision right into the fibroid and one can much more readily find the line of cleavage. This is particularly important in large fibroids, especially of the soft type. Whenever one has difficulty in enucleation, it is wise to extend the incision deeper into the fibroid. Where a whole nest of small fibroids are close together sometimes the surrounding tissue is so firm that one mistakes it for the fibroid itself. In the case of multiple fibroids, it may not always be possible to make all the incisions on the front of the uterus, as recommended by Alexander, or to tunnel the uterus, as is done by Bonney. In every case,

one should aim at reducing the number of incisions into the uterus to a minimum. One should never hesitate about opening into the uterine cavity if it will facilitate enucleation, and it should never be omitted if there is any suspicion of a polypoid endometrium or a tiny submucous fibroid. In fact, in all cases where bleeding has been the most prominent symptom, I feel it should be done routinely. Frequently, during enucleation, one may see strands of tissue, which may contain vessels, and should be clamped before division. Every cavity should be completely obliterated with catgut, after having ligated all bleeders. I think this is best done in layers by continuous suture. The serous coat should be carefully and accurately sutured, drawing each stitch just tightly enough to slightly blanch the cut edges. Excess tissue is better not cut away, providing hæmostasis is perfect.

The main risk of myomectomy is intestinal obstruction, due to oozing of blood from the incisions in the uterus. Therefore, the absolute control of hæmorrhage is imperative. As far as feasible, make incisions on the anterior surface of the uterus, and where this is not possible be sure to cover them with peritoneum. After the operation is completed, the uterus is frequently very misshapen, and looks as if it could never function normally again. It is well to remember that the uterus heals satisfactorily, and shows practically no weakness in future pregnancies. Keith Murray says, "The uterus, apparently mutilated by the enucleation of multiple fibroids, has a power of recuperation and involution incredible to those who have not tested it." The following case illustrates this point:—

Miss H., operated upon on December 2nd, 1922, for multiple fibroids. At the patient's request myomectomy was done, and five tumours, varying from 2 inches to 4 inches in diameter, were enucleated through three incisions into the uterus. This left the organ so distorted and misshapen as to bear no resemblance to a uterus. On February 26th, 1926, she was operated upon for an acute intestinal obstruction, due to a loop of jejunum having become adherent to the abdominal scar of the former operation. Examination of her uterus at this time, showed it to be normal in shape, size, and position, and to all appearances capable of perfect function.

The sentimental value of the conserved uterus must never be lost sight of. Recently a very neurotic patient with multiple fibroids, in whom I had asked to be permitted to perform a hysterectomy should it be that I found myomectomy too prolonged, made the statement that she had been told that after hysterectomy the marital relations were altered, and she was, therefore, anxious that hysterectomy should be done only

as a last resort. In this case even though it was necessary to remove twenty-eight myomata, I felt that the added risk was quite justifiable.

Giles says, "There is a recurrence of symptoms in 10 per cent of the patients." This, Bonney says, is always due to having overlooked some small tumours. He believes that the seeds of all fibroids are formed before the age of thirty-five. Undoubtedly, the more myomectomies one performs, the better one does them, and with less risk of overlooking small tumours. There may be a trifle more risk in doing myomectomy than hysterectomy, but there is very little difference in good hands. Masson reports 259 cases of myomectomy with 2 deaths, or 0.177 per cent, while during the same period there were 1,643 hysterectomies for fibro-myomata with 31 deaths, or 1.88 per cent. The mortality should be limited to accidental causes, of which pulmonary embolism represents about 50 per cent.

There is a reasonable chance of pregnancy following myomectomy. Schmidt reports 40 per cent of pregnancies in patients under 35, Giles reports 26 per cent, while Noble says 10 per cent. In any case there is a sufficient number to warrant a wider application of this very satisfactory operation.

HYSTERECTOMY

Hysterectomy must be the operation of choice in all cases—

- (1) Where myomectomy is not considered wise.
- (2) In all patients over forty years of age, who are not suitable for irradiation.
- (3) Where tumours are rapidly growing or degenerating.
- (4) Where pain is present, or where pressure causes urinary disturbance or constipation.
- (5) Where there is metrorrhagia, or a foul uterine discharge.
- (6) Where signs of malignancy in the body are present. Should a definite carcinoma of the cervix be also present, the case is much better treated with radium.
- (7) In all cases of marked anæmia, where further loss of blood may be serious. One should usually do transfusion as a preliminary. In these urgent cases, hysterectomy is much better than radiation, which may not bring about a cessation of bleeding for several weeks.
- (8) Finally, all cases with concomitant adnexal disease or inflammation, as well as all those with lacerations, erosions, and degeneration of the cervix, conditions which will probably give rise to further trouble should be cared by hysterectomy.

I feel that one should conserve the ovaries in every case, if the patient has not reached the menopause. If the presence of pelvic infection necessitates their removal, normal parts of them may be transplanted into the abdominal wall. I have seldom seen marked nervousness suggestive of an artificial menopause follow hysterectomy, with preservation of the ovaries.

I feel that total hysterectomy, rather than subtotal, should be done on all women who have borne children, and especially if there is any disease whatever in the cervix. I have repeatedly seen patients, whose cervix was left behind after subtotal hysterectomy, who were most unhappy because of a persistent leucorrhœa. In the last year I have seen two cases where malignancy developed in the cervix left behind at operation some years previously. For these reasons, I am convinced that one should do a subtotal hysterectomy only in women who have not borne

children, and whose cervixes are absolutely normal.

In deciding which of the above mentioned methods of treatment we shall employ, we must be guided not only by the fibroid and its type, location and condition, but we should also remember that other associated pathological conditions are frequently present. Our aim should be to employ the most conservative treatment which will eradicate the pathological condition, and bear in mind the preservation of the function of the uterus, when feasible, and of the ovaries always.