THE TREATMENT OF FIBROID TUMORS OF THE UTERUS.*

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When I addressed the British Gynecological Society¹ in 1901 on the subject, "The Complications and Degenerations of Fibroid Tumors of the Uterus as Bearing on the Treatment of These Growths," reporting 218 cases, it was with the purpose of pointing out that, in my judgment, the profession had not had a proper estimate of the natural history, degenerations, complications and dangers of fibroid tumors. At that time no one had considered this subject from the standpoint in question. Martin, 1888, had written a paper² reporting the degenerations in the tumors themselves, but ignoring the complications which existed in the particular cases reported. But from 1888 until 1901 the literature shows that no special attention had been paid to this subject, and that the complications of fibroid tumors had attracted practically no attention whatever. It can not be otherwise than gratifying to me that following my own paper on the subject there have been a number of very valuable and careful reports of the individual experience of other surgeons in this field. This is particularly true of the papers of Cullingworth,³ Frederick,⁴ Scharlieb⁵ and Hunner.⁶

The conclusions of my paper⁷ of 1903, reporting 258 cases of fibroid tumor, were as follows: It was estimated that because of the degenerations present, 16 per cent. of the patients would have died without operation, and that because of the complications present, 18 per cent. would have died without operation, or a total of 34 per cent. In addition to this a certain number of

the patients would have died from intercurrent diseases contracted because of the reduced state of health of the patient; in other words, that more than one-third of the women having fibroid tumors which had come under my observation would have died had they not been submitted to operation.

At this date (Jan. 31, 1904) I have operated on 278 patients having fibroid tumors of the uterus. A table of the complications and degenerations encountered in these cases follows. In 180 cases complications or degenerations were present, and in 98 cases no degenerations or complications were recorded. There is no doubt that a good many of the simpler complications and degenerations were not recorded, more especially in the early work. This applies more particularly to edema and to myxomatous degeneration of the tumors. These cases were looked on at that time as instances of soft fibroids, and no note was made of their pathologic condition.

COMPLICATIONS AND DEGENERATIONS OF FIBROID TUMORS COMPLETED TO JAN. 31, 1904.

* Read to open the discussion on Dr. McDonald's paper, which precedes.

1. Noble, Chas. P.: British Gynec. Jour., 1901, vol. xvii, No. 67, p. 170; Amer. Jour. Obst., 1901, vol. xlv, No. 3, p. 289.

2. Martin, A.: Centralblatt für Gynäkologie, 1888, p. 389.

3. Cullingworth, C. J.: An Analysis of One Hundred Cases of Uterine Fibromyoma, in Which the Condition of the Tumors and the Complications to Which They Had Given Rise Were Verified by Operation, Jour. Obst. and Gynec. British Empire, 1902, vol. i.

4. Frederick, C. C.: A Study of Uterine Fibromyomata, with Especial Reference to Their Degenerations and Complications as Furnishing Reasons for Early Operations, Amer. Gynec., 1902, vol. i, p. 255.

5. The following tables from the article by Dr. Mary Scharlieb were received too late for incorporation in the paper, and are published as a footnote for the information of the reader. (An Analysis of One Hundred Cases of Fibromyomata Uteri, Jour. Obst. and Gynec., British Empire, 1902, vol. ii, p. 323.)

DEGENERATIONS OF FIBROID TUMORS IN 100 CONSECUTIVE CASES.

Edematous and myxomatous.....	5
Sarcomatous.....	6
Cystic or fibrocystic.....	7
Calcereous.....	2
Necrotic, infected.....	2
Sloughing.....	3
Carcinomatous invasion.....	1
	26

COMPLICATIONS OF FIBROID TUMORS IN 100 CONSECUTIVE CASES.

Cyst or cystomata of one ovary or both ovaries...	23
Broad ligament cysts.....	2
Thrombosis of veins of lower extremity before operation.....	2
Varicose veins of pelvis.....	4
Hydrosalpinx.....	4
Pyosalpinx, double.....	1
Fibroma of fallopian tube.....	1
Papillomata of the appendages.....	1
Adhesions to viscera.....	6
Adhesions of tumors.....	5
Pregnancy.....	1
Inflammation of appendix.....	1
	51

6. Hunner, Guy L.: One Hundred Consecutive Cases of Myoma of the Uterus. Amer. Medicine, 1903, vol. vi, No. 2, pp. 55-57.

7. Noble, Chas. A.: A Study of the Degenerations and Complications of Fibroid Tumors of the Uterus from the Standpoint of the Treatment of These Growths. Amer. Gynec., 1903, April.

Cellotomies.....	235
Vaginal hysterectomies.....	7
Vaginal myomectomies.....	36
Total.....	278
Adenocarcinoma of body of uterus.....	6
Epithelioma of cervix uteri.....	4
Epitheliomatous infiltration of fibroid tumor arising from adenocarcinoma of corpus uteri by metaplasia.....	1
Sarcoma.....	2
Chorioepithelioma.....	1
Myxomatous degeneration of tumor.....	8
Cystic degeneration of tumor.....	7
Calcereous infiltration of tumor.....	6
Necrosis of tumor.....	18
Twisted pedicle, pedunculated tumor.....	2
Intraligamentous development of fibroid.....	19
Prolapsed uterus.....	5
Retroversion of uterus.....	4
Papillary carcinoma of both ovaries.....	1
Ectopic pregnancy.....	3
Dermoid cyst, bilateral; umbilical hernia.....	1
Dermoid cyst, suppurating sinus through abdominal wall.....	1
Dermoid cyst with twisted pedicle.....	1
Dermoid cyst.....	1
Ovarian cyst with twisted pedicle.....	1
Ovarian cyst, suppurating.....	1
Ovarian cyst, bilateral.....	2
Ovarian cyst, unilateral.....	22
Cystic degeneration of ovaries.....	5
Abscess of ovary.....	1
Parovarian cyst.....	2
Pyosalpinx, bilateral.....	9
Pyosalpinx, unilateral.....	4
Hematosalpinx.....	1
Hydrosalpinx, bilateral.....	10
Hydrosalpinx, unilateral.....	8
Salpingitis, bilateral.....	2
Salpingitis, unilateral.....	10
Abscess of broad ligament.....	1
Appendicitis.....	10
Total.....	180

It is interesting to compare my own series of cases with that reported by Dr. McDonald.⁸ Of his series of 280 cases there were:

Chorioepithelioma.....	1
Sarcoma.....	3
Squamous cell carcinoma of cervix.....	2
Adenocarcinoma.....	6
Necrotic, cystic, infected.....	1
Necrotic and hyaline.....	3
Necrotic.....	4
Cystic.....	8
Calcereous, necrotic, hemorrhagic.....	2

This makes a total of 30 patients who undoubtedly would have died without operation. It is equally certain that a considerable number of the patients having other degenerations would have died.

Of the complications there were:

Ovarian cysts.....	15
Tubo-ovarian cysts.....	1
Ovarian carcinoma.....	2
Salpingitis and tubo-ovarian abscess.....	3
Pyosalpinx.....	5
Extra-uterine pregnancy, salpingitis and hydrosalpinx.....	1

8. McDonald, Ellice: Complications and Degenerations of Uterine Fibromyomata. See p. 1344, this issue.

This is a total of 29 that would have died without operation, giving a mortality of 59 in 280 cases, or 21 per cent. This does not include the mortality which would follow the various degenerations not classed as fatal, nor the various complications not necessarily fatal. When these are added, it would bring the mortality in Dr. McDonald's series approximately to that in my own and to that in Frederick's and Cullingworth's.

As illustrating the way these cases run: Since September 15 I have operated on 13 cases, the complications of which are as follows:

1. Salpingitis, submucous fibroid previously removed.
2. Uncomplicated.
3. Adenomyoma.
4. Uncomplicated.
5. Uncomplicated.
6. Calcareous infiltration.
7. Uncomplicated.
8. Left hydrosalpinx, right salpingitis.
9. Bilateral pyosalpinx.
10. Adenocarcinoma of body of uterus.
11. Necrotic tumor, adenocarcinoma of body of uterus.
12. Abscess of broad ligament, bilateral salpingitis.
13. Submucous fibroid, sloughing.

This group of cases occurring in three months and a half illustrates the erroneous nature of the old view concerning the innocence of fibroid tumors. Or, to put the matter in a more correct way, it illustrates the fact that women having fibroid tumors are, as a rule, sick women, who have not only fibroid tumors, but other conditions, the complications often being even more serious than the tumors themselves.

Dr. McDonald's tables, those of Cullingworth, Frederick and my own, show the folly of the classical view that women having fibroid tumors of the uterus, as they come under the observation of the gynecologist, are practically well women, suffering but few or no symptoms, and running but little risk as to their health or as to their life. It is begging the question to change the classification and to assert that these women are sick merely because of the complications. The change in classification does not alter the fact that the women having the fibroid tumors, as they come under observation, are usually sick women. As I have presented this subject before several medical bodies already, I am aware of the objections to the point of view which I hold, and of the statements and arguments of those who claim to be conservative (using the term in its debased instead of its primary sense) in the treatment of fibroid tumors. As a matter of fact, I believe that these men operate on these cases with cheerful alacrity, but base the indication for operation on the particular complication which may be present. Many of the complications, so far as concern their risks to health or to life, are trifling as compared to the risks of a fibroid tumor. For example, such complications as a parovarian cyst, a retroversion of the uterus with or without adhesions, or cases of appendicitis which have recovered from the acute attack (the so-called interval operation). Every surgeon operates on such cases, although the gravity of the lesions is trifling as compared with the gravity of a fibroid tumor. Patients in whom the tumors are not complicated by other conditions are operated on, as alleged, because of the symptoms which are present—hemorrhage, pain, the presence of a tumor, pressure on the urinary organs or on the alimentary canal, etc. For example, in my table of 278 cases, 180 would be operated on because of the complications present, and the remaining 98 would be operated on because of hemorrhage, pain, the presence of the tumor or pressure on the urinary organs or on the alimentary canal. That is to say, the form of words used in stating the indication for operation does

not alter the fact that these cases are operated on by surgeons and gynecologists at the present time as a routine matter of practice.⁹

Another point to which I wish to call special attention is the relation of fibroid tumors to malignant degeneration and especially to adenocarcinoma of the body of the uterus. In Martin's group of 205 cases there were reported:

Sarcoma of tumor.....	6
Carcinoma of cervix uteri.....	2
Carcinoma of corpus uteri.....	7

9. Although the position I have taken, with reference to the nature of the indications for operation for fibroid tumors in the various contributions which I have made to the subject, seems to me entirely clear, those who maintain the classical or traditional attitude in their public discussions on the subject have constantly confused it or failed to appreciate it. In order that there may be no doubt about the matter I shall state it in formal terms. The carefully gathered facts with reference to the life history, the degenerations and the complications of fibroid tumors which are presented in this paper, and have been presented in the previous papers, show that about 16 per cent. of women having fibroid tumors would die if not operated on because of the degenerations and complications arising in the tumor or in the uterus; in other words, that the women having fibroid tumors run a far greater risk of losing their lives by not having them operated on than by submitting themselves to operation. In addition it has been shown that women having fibroid tumors as they present themselves to the gynecologist have, in addition to the tumor itself, many complications outside of the tumor and the uterus. Of the women having fibroid tumors, who have come under my observation, about 18 per cent. would have died without operation because of the complications outside of the tumor and the uterus. This state of facts forms a secondary but an additional reason for operating on women having fibroid tumors, taking them as a class. Taking them as a whole, at least one-third of the women having fibroid tumors, who have come under my observation, would have died had they not been operated on. I hold that the scientific position in reference to the indication for fibroid tumors is that as these facts are incontrovertible—being based on careful clinical and pathologic investigation—that the indication for operation should be based on these facts and not on any particular symptom which may be present at the time the woman comes under observation. My position is distinctly in opposition to that which may be called the classical or traditional position, which is, that the operation to remove a fibroid tumor should be done because of the symptoms it is producing at the time the patient presents herself for treatment—whether this be hemorrhage or pain or pressure on the urinary organs, or on the alimentary canal, or whether it is a state of the mind arising in the woman because of her knowledge of the existence of the tumor. Nothing is more variable than symptoms, which can frequently, and indeed, usually, be removed by appropriate treatment. Indeed, the state of the case is even worse than this, for most symptoms it is necessary to take the patient's statement. On the other hand, nothing is more definite than physical facts and pathologic findings. When the two positions are placed in opposition it seems to me there can be no question as to which is the correct one and which should be accepted by the profession. To speak by analogy, a fibroid tumor should be removed for the same reason that an ovarian tumor should be removed; the indication varying in degree, but not in kind. Ovarian tumors are removed, irrespective of the symptoms they are producing, because of our knowledge of the life history of these growths, which is, that if left to pursue their usual development a fatal result will occur in almost all cases. Similarly, fibroid tumors should be removed, because if left to pursue their usual development, at least in one-third of the cases a fatal result will occur.

For those who are convinced that the classical position is correct, I would suggest that one of the strongest arguments that could be produced in support of their position would be to institute a careful research into the autopsy records of well managed institutions in order to learn, first, in what proportion of women fibroid tumors are found at autopsy, and second, what relation these tumors had to the state of health or to the death of the particular patients. It is a classical statement that many women live and die without the knowledge that they have had fibroid tumors. This statement I do not believe, but I would be quite willing to be convinced of its truth on adequate evidence.

It has also been suggested to me that being a gynecologist with a consulting practice, my experience with reference to fibroid tumors is an exceptional one, and that the experience of the family physician is quite different: the difference being that fibroid tumors as he sees them are producing much less mischief than is the case in my experience. At first sight this seems possibly to be a plausible statement. However, I was at one time a family physician myself, and for ten years I had a large experience as attending physician to various dispensaries for the diseases of women, in both of which positions my experience would naturally be the same as that of the family physician. Comparing that experience with that of the present I am able to see no difference whatever; therefore, it is my belief that while this statement sounds plausible, it is incorrect.

In my own experience (278 cases) there have been encountered:

Chorioepithelioma	1
Sarcoma	2
Epithelioma of cervix uteri.....	4
Adenocarcinoma of the corpus uteri.....	6

In Frederick's paper, including a series of 125 cases of fibroids, there were:

Sarcoma	2
Epithelioma of cervix uteri.....	2
Carcinoma of endometrium and body.....	6

In Dr. Cullingworth's paper, being a series of 100 cases, there was:

Myxosarcoma	1
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Dr. McDonald reports a series of 280 cases in which there were:

Chorioepithelioma	1
Sarcoma	3
Squamous cell carcinoma of cervix uteri.....	2
Adenocarcinoma of corpus uteri.....	6

This gives a total of 988 cases, in which occurred:

Chorioepithelioma	2
Sarcoma	14
Carcinoma of cervix uteri.....	10
Carcinoma of corpus uteri.....	25

It is at once apparent that the adenocarcinomata of the body are much more common in cases of fibroid tumors than are the epitheliomata of the cervix, whereas in general, epithelioma of the cervix is far more common than adenocarcinoma of the body. The usual ratio between epithelioma of the cervix and adenocarcinoma of the corpus of the uterus is as one to three, or four. (Cullen¹⁰ gives 123 cases of squamous cell carcinoma of cervix, 18 cases of adenocarcinoma of cervix, and 35 cases of adenocarcinoma of the body of the uterus.)

The natural conclusion to be drawn from so large a series of cases is that there is a direct causative relation between fibroid tumors and the development of carcinoma of the body of the uterus.

Dr. McDonald states that small fibroid tumors, especially the subserous and intramural fibroids, do not require early operation. From my standpoint this is the only group of fibroids in which this question is debatable. In all other classes certainly, with the knowledge before us at the present time, patients having fibroid tumors should have them removed. With reference to the small tumors which are subserous or intramural, undoubtedly if there is any class of fibroids which do not require removal, it is this group.

The facts drawn from the large series of cases which I have reported not only from my own experience, but from that of Martin,¹¹ Cullingworth,³ Frederick,⁴ and now from Dr. McDonald's paper⁸ (988 cases), make it more than doubtful whether it is conservative (in the primary sense of the word) to advise against the removal of a fibroid tumor in any instance, unless in the particular case there is some good reason, owing to disease in other organs of the body, why an operation would be especially hazardous. An analysis of the various series of reported cases shows the following facts:

	Per cent.
Sarcoma developed in.....	1.5
Adenocarcinoma of the corpus uteri developed in.....	2.5
Carcinoma of the cervix developed in.....	1.0
Necrosis of the tumor occurred in.....	6.1
Cystic degeneration occurred in.....	3.4

These facts are incontrovertible; and when added to the probability of the continued growth of the tumor in any special instance and to the probability of various complications arising outside of the tumor and of the

uterus, it seems to me clear that anyone having an open mind must be convinced that the conditions surrounding any particular instance of fibroid tumor of the uterus must be exceptional for it to be less dangerous for a woman to retain her tumor than to have it removed by a competent gynecologist.

At the same time, so great is the influence of tradition and so difficult is it to change one's habits of thought, that in this particular group, in spite of my convictions, I have been in the habit of advising expectant treatment. In the not distant future, however, it seems to me very probable that in this group of cases also patients will be advised to have the tumors removed, unless in a particular case there is some good reason to the contrary. It is the general rule in surgery that a tumor when present in the body should be removed, and this is as applicable to fibroid tumors of the uterus as to other tumors.

The evidence which is now available proves conclusively that over one-third of the women having fibroid tumors will die unless the tumors are removed; that the risk of radical operation in uncomplicated cases is very small—probably 1 or 2 per cent.; that in the average of cases, in good hands, it is about 5 per cent., rising to 10, 20 or 30 per cent. in the gravely complicated cases; that, therefore, on the main proposition there is no question but that fibroid tumors should be removed. The debatable ground is whether or not to remove small fibroid tumors, especially when subserous or intramural.

Special Article.

THE ARMY MEDICAL DEPARTMENT.

III.

A HISTORICAL SKETCH.

(Continued from page 1288.)

The admirable medical organization of Letterman disappeared with the armies of Grant and Sherman, and Congress, weary of war, could not be induced to take interest in any military matter, except in the direction of reduction and economy. While all other nations made haste to apply the lessons of our war and to remodel their medical organizations in accordance with them, our own Medical Department reverted to antebellum conditions and went backward. The hospital stewards were the only permanent enlisted personnel and all nursing and other work about the hospitals was done by an uninstructed and constantly changing personnel of men detailed from the companies.

No worse system could have been invented, and yet it lasted 22 years, until, in 1887, the first step toward a modern organization was made by the establishment of a hospital corps, consisting of privates and two grades of non-commissioned officers. The medical officers then began the systematic training of the personnel and the study of modern medical organization with a view to war conditions. This movement unfortunately was misunderstood by the officers of the line and met, especially at first, with much ridicule and covert opposition, the use of military titles by medical officers being especially resented. In 1892 the Army Medical School was established in Washington for the instruction of young medical officers in hygiene, medical administration and other branches of special importance in military medicine. The influence for good of this school has been already marked and is constantly widening, and now that the course has been thrown open by act of Congress to offi-

10. Cullen, Thomas S.: *Cancer of the Uterus*, New York, 1900.

11. Martin, A.: *Pathology and Therapeutics of the Diseases of Women*, Boston, 1900, pp. 268-272.