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Relief of Hemorrhage Due
to Uterine Fibroids

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NEW YORK

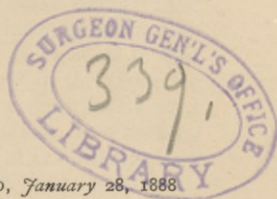


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THE USE OF THE CURETTE FOR THE RELIEF OF HEMORRHAGE DUE TO UTERINE FIBROIDS.¹

CURETTING the uterine cavity is such a familiar operation that it is unnecessary to refer to the ordinary indications and technique. It is my purpose in this brief paper not to suggest any new application of this useful little instrument, but simply to invite discussion of a simple method of treating a formidable condition, which, though familiar to gynecologists, does not appear to have met with the recognition which it deserves among the profession in general. Profuse hemorrhage from the non-puerperal uterus is an alarming phenomenon to the practising physician. It is noticeable that men who preserve the utmost *sang-froid* in the presence of post-partum flooding are sometimes completely at a loss in cases of menorrhagia, and, instead of searching for the root of the evil and striking at it directly, they will temporize, and rely upon medicinal treatment, hoping that the patient may by good fortune be enabled to tide over the period that elapses before the menopause, in deference to the popular idea that at this time the hemorrhage will suddenly and mysteriously cease. But this hope is more or less illusive, for not only may the presence of the fibroid prolong the climacteric period, but the tumor may actually increase in size, while the loss of blood becomes more, instead of less, profuse. In short, the patient may become gradually weaker and

¹ Read before the Obstetrical Section of the Academy of Medicine, November 23, 1887.

weaker while the attendant is waiting for nature's cure, until, when he is finally aroused to a real sense of her serious condition, and decides that a radical operation is necessary, she is no longer in a condition to submit to it. Every gynecologist is familiar with mournful examples of what "might have been" in such cases if the cause of the menorrhagia had been discovered earlier and an intelligent effort made to remove it.

There is a general opinion among practitioners that there is no middle ground in the treatment of these cases between internal medication (perhaps combined with intra-uterine applications, astringent douches, and tamponing) and a radical operation. Modern text-books are responsible for this. "The number of articles devoted to the consideration of operative measures for the cure of this affection," says Winckel, "is five times as great as that of those advocating medical treatment, and in the latter ergot and electrolysis are alone mentioned with any degree of confidence." The same conservative writer is almost the only one who alludes to the use of the curette, in these words: "But when all these remedies are no longer of avail the uterus must be sounded, or eventually dilated, in order to see whether an adenoma of the mucous membrane is present, and, if so, to remove it. It is advisable to curette the uterus in any case, and after swabbing it out with absorbent cotton wrapped upon the tip of a sound, to check the hemorrhage, if present, with solution of the sesquichloride of iron."

It is important, before proceeding to the practical part of this subject, to call attention to a few elementary facts in uterine pathology, at the risk of repeating what is already well known to my hearers. It would seem unnecessary to insist upon the fallacy of the idea that in hemorrhage from fibroid uteri the blood comes from the tumor itself, or that, except in rare cases, it is due to the rupture of blood-vessels either within the tumor or in the mucous membrane covering it. Yet we read in a

recent edition of a well-known text-book on gynecology that "the loss of blood takes place from the rupture of some little vessel on the lining membrane of the canal covering the portion of the partially projecting tumor." Of course, if this explanation were correct, the treatment advocated in this paper is based on entirely erroneous principles; but it is impossible to accept this theory, even from a strictly clinical stand-point. Without dwelling on points which are sufficiently familiar, let me remind you that the hemorrhage from fibroid uteri is frequently quite out of proportion to the size of the tumor, and also to the depth of the uterine cavity as indicated by the probe. Thus, a large subperitoneal tumor, filling the abdomen, may give rise to pressure-symptoms alone, while an insignificant submucous polypus occasions exhausting menorrhagia. The difference does not lie in the relative vascularity of the growths, nor does their position alone furnish an explanation. Again, we know that the hemorrhage is apt to be most excessive from uteri which contain intramural growths that project into the uterine cavity, *i.e.*, are partly submucous. But such growths are even less vascular than the two former varieties. Now, the hemorrhage is essentially a menorrhagia, like that due to endometritis fungosa, and hence is directly referable to menstrual congestion. In neither case is it usual for a gush of blood to occur without any warning, as would be the case if it came from a ruptured vessel, but the hemorrhage begins like the normal menstrual flow, and subsequently becomes excessive. The natural inference is, that in the case of fibroid uteri also the blood comes directly from the hypertrophied mucous membrane. Lay open the uterine cavity in a typical specimen of intramural fibroid; it may be only moderately enlarged, but even on gross inspection it will be evident that the endometrium is thicker and more spongy than it is in a normal uterus, while here and there are to be seen those translucent cauliflower growths with which we are so familiar under

the name "fungosities." Sections made through the uterine wall at different points will show clearly the hypertrophy of the mucosa, and accompanying it an immense increase in its usual vascular supply. Each fungosity represents a relatively enormous bleeding surface, as is daily proved clinically, as well as anatomically. Now, this hypertrophy of the endometrium is noticeable everywhere except at one point, and that is over the surface of the projecting tumor, where it is actually atrophied, in consequence of long-continued pressure, and, so far from containing large vessels which, according to the theory to which reference was made, rupture under the increased pressure of the menstrual nixus and are thus the direct source of hemorrhage, it is less vascular than normal, containing only a few dilated veins. Even in the case of polypoid growths, the bleeding is seldom from the tumor itself, unless there be complete obstruction to its venous circulation or actual ulceration. In consequence of this localized atrophy of the mucous membrane covering the tumor, according to Gusserow, there is produced collateral hyperæmia in the rest of the mucosa, leading to swelling and hypertrophy of the same, and which at the time of the menstrual congestion gives rise to profuse hemorrhage. "That, moreover [to quote from the same writer], the changes in the uterine mucosa are not always due to such purely mechanical causes as hyperæmia, from local stasis, but that inflammatory swelling of the endometrium may occur, in consequence of the irritation produced by the tumor, is proved by those occasional cases of hemorrhage, accompanying pure subperitoneal fibroids, in which we find here and there in the uterus changes that may be best described as chronic metritis, and that they are more frequent in connection with interstitial growths."

The pathological sequence is now clear. The presence of a fibroid tumor (especially of the submucous or combined submucous and intramural variety) determines

an increased afflux of blood to the uterus, not so much because of the extra amount of blood required for the nutrition of the growth as by reason of the venous obstruction induced by its presence. The entire uterus hypertrophies in consequence, but this hypernutrition affects principally the endometrium, which undergoes the change so common in subinvolution, but much more marked. When to this general hyperplastic endometritis is added the collateral hyperæmia induced by localized atrophy of the mucosa covering the tumor, the true cause of the hemorrhage is presented beyond a shadow of doubt. The blood is derived from the entire mucous surface, and not from any single ruptured vessel or sinus. This explains why a tumor of insignificant size may give rise to a hemorrhage as alarming as it is apparently inexplicable, while a growth twenty times as large may cause only a slight increase in the normal menstrual flow. The difference is to be sought for, not in the difference in vascularity between the growths, nor entirely in their location, but in the condition of the endometrium in the two cases. Why the latter is much hypertrophied in one case and only slightly so in another, where the conditions are apparently similar, we cannot positively determine, any more than we can tell why the removal of the mucosa arrests the hemorrhage in one instance and not in another. We may be sure of the source of the hemorrhage, while we cannot control the *ultima causa*.

These simple anatomical facts, which are easily demonstrated at the operating-table and in the dead-house, are capable of a direct practical application. Can we not, by removing one of the principal links in the pathological chain, relieve the alarming symptom under consideration, even though the active cause remain? In short, if the hypertrophied mucosa is scraped away, will not the hemorrhage be lessened? I do not desire to make any sweeping assertions, based on insufficient and imperfect statistics, regarding the benefit obtained by the use of the curette in cases of hemorrhage from fibroid uteri, but

I am sure that there are few gynecologists who cannot recall instances in which curetting, adopted merely as an empirical measure, has been followed by unexpected, not to say brilliant, results. It is unfortunate that no reliable tables of statistics have been compiled; those derived from hospital-records are not conclusive, since, although there is no lack of cases (at least in the Woman's Hospital) in which hemorrhage was relieved by a single operation, the after-history of the patient is seldom obtainable. Of course, the hemorrhage tends to recur, just as the lining of the uterine cavity is renewed after being thoroughly removed. Curetting is not to be regarded as other than a temporary relief under any circumstances. That it may afford relief for a long period is shown by the following typical case:

An unmarried woman, aged twenty-five, was under my care about five years ago, suffering from menorrhagia, which had reduced her to a decidedly anæmic state. She also had moderate pressure-symptoms. Examination revealed the presence of an interstitial fibroid as large as a man's head, which caused uniform enlargement of the uterus, the cavity of the organ having a depth of between four and five inches. Medication, tamponing, and injections were of slight avail, and the patient's condition was considered sufficiently serious to warrant a radical operation. As an experiment, the uterine cavity was thoroughly curetted, a quantity of hypertrophied mucous membrane, or fungosities, being removed, after which an application of tincture of iodine was made, and the same was repeated three or four times subsequently. At her next period a marked diminution in the flow was noted, and soon after she passed from under my observation. Previous to this she asked me if it would be wise for her to marry, to which I returned a decided negative, setting forth to her not only the dangers to which she would be exposed if she became pregnant, but the immediate risk of a return of the hemorrhage which might be entailed by the marriage relation. She wrote to me twice—once

after an interval of three or four months, to say that her monthly flow was nearly normal in amount, and again, after a longer interval, saying triumphantly that she had been married for several months and felt better than ever before. The last news from her came in the shape of a letter from her physician, in which he stated that she had become pregnant, had aborted, and was flowing so profusely that her recovery was doubtful.

The subsequent history of the case does not concern us. The point to be emphasized is the prompt relief afforded by the use of the curette, which relief would doubtless have been long-continued, had not the patient deliberately incurred the danger against which she was warned. The excessive loss of blood which followed the early abortion was due not alone to the inability of the uterus to contract properly in consequence of the presence of the fibroid, but also to the fact that under the double influence of the tumor and pregnancy the endometrium became more hypertrophied than it was originally.

Theoretically, the objection may be raised that the simple removal of the mucosa is not a scientific method of dealing with the pathological condition as a whole. This is true; still, it must be remembered that we are discussing the treatment of a single objective symptom—hemorrhage. Subjective symptoms, due to the mechanical pressure of the tumor on adjacent organs, ducts, or vessels, are not considered in this paper; these alone may be so serious as to justify hysterectomy. Intra-uterine growths should, of course, be removed at once; simply scraping off the mucous membrane would be unsurgical when the polypus itself could be extirpated without serious risk. The condition in which we may hope for success from curetting is, as has been pointed out, that of an intramural growth, projecting into the uterine cavity, precisely such a sort as surgeons are sometimes tempted to attack with the spoon-saw, and occasionally with unfortunate result. The technique of

curetting is quite familiar, but it is important to remember that the anatomical conditions are different from those in an ordinary case of endometritis fungosa accompanying subinvolution. In fibroid uteri the os is frequently drawn up behind the symphysis, so that it is only with the greatest difficulty that an instrument can be introduced into it; indeed, this is often impossible. Again, the uterine cavity may be greatly elongated, but narrow and tortuous, so that a curette could never be manipulated within it. But, in my experience, the endometrium is more often atrophied than hypertrophied, under the latter circumstances, so that curetting would do no good. Clinically, it is, of course, impossible to determine whether a given case presents exactly such anatomical conditions as will justify us in predicting a favorable result from the operation, but I would expect decided benefit where the tumor was of moderate size and the uterine cavity was considerably enlarged—where the hemorrhage was out of proportion to the size of the growth, and the sound revealed a general soft, spongy condition of the endometrium. For the rest, the operation should be performed about midway between the monthly periods, the patient being thoroughly anæsthetized; the curette should be used vigorously, and as long as any shreds of hypertrophied tissue can be removed. The caution to apply iodine to the abraded surface at intervals after the operation is especially applicable here. It seems illogical to rest content with astringent applications alone, when the desired result can be obtained by scraping away the diseased tissue, and then retarding its renewal by subsequently applying the same remedies. I do not doubt that some of the good results obtained by Apostoli in treating uterine fibroids by passing powerful currents through the intra-uterine electrode are directly due to the charring of the mucous membrane with which the latter comes in contact.

Another important point is not to give up curetting until it has received a fair trial. Suppose the lining

membrane does re-form in a few months, it can easily be scraped off again, and if the patient can be kept in this way from exhausting hemorrhages until the menopause, we have reason to feel better satisfied than if we had removed her ovaries and tubes, perhaps without attaining the desired result, not to speak of the more serious operations, enucleation and supravaginal amputation. The dull-wire curette is not the exclusive property of gynecologists. No special skill is required in using it. In spite of all that has been said and written in its favor, it does not seem to be as popular among the general profession as it should be, else uterine hemorrhage would not be such a bugbear as it is. It is conceivable that much good might be accomplished if the fact could be emphasized that it is not necessary to remove the entire uterus because of hemorrhage which cannot be controlled by medication. I can recall several fatal cases of hysterectomy, performed for the relief of hemorrhage from fibroid uteri, in which an examination of the specimens showed that the source of the bleeding was clearly the *interior*, not the *exterior*, of the organs.

It may be urged in objection that the operation recommended in this paper is uncertain in its results, and that the indications are not sufficiently clear; the same applies to removal of the tubes and ovaries, and the relative risks are widely different. Curetting involves little more danger than does an intra-uterine application, and, being such an innocent procedure, we can afford to practise it simply as an experiment. No patient will object to it, even when presented in that light, if she understands that it may enable her to avoid a more serious operation. It is hardly necessary to add that we are not justified in allowing a patient to bleed to death while we are testing the value of the palliative measure.

In conclusion, I would again express my regret that the practical deductions made in this paper do not rest upon a more solid statistical basis. Definite facts are much needed, and these can only be furnished as the

result of a series of observations made in private practice and extending over a sufficiently lengthy period to make evident the remote as well as the immediate effects of the treatment described. Such statistics need not emanate from specialists alone. This is a fruitful theme for collective investigation. The following is a brief summary of the points which deserve study :

1. The hemorrhage in cases of fibroid tumor of the uterus has its source, not in the tumor itself, but in the hypertrophied endometrium.

2. The hemorrhage is not directly proportionate to the size of the tumor, but to the extent of the mucous surface. Venous obstruction and the menstrual congestion in the mucosa are the chief active causes.

3. In certain cases the hemorrhage can be diminished for a considerable period by thoroughly scraping away the hypertrophied endometrium and repeating the operation as often as may be necessary to keep the menorrhagia under control.

4. Curetting is merely a palliative measure, but it may enable the patient to survive until she is relieved at the menopause, whereas radical operations too often result fatally.

5. Curetting in these cases should be regarded as an experiment, which, however, is so harmless and so frequently successful, that we are justified in giving it a fair trial before advising oöphorectomy, myomotomy, or supravaginal amputation.

6. The use of the curette requires no special skill. It is an operation for the general practitioner, and is much more rational than to allow the patient to become exhausted by repeated hemorrhages which medication and other palliative measures are powerless to control.

