Emmett (T. A.)

The Etiology of Uterine Flexures

WITH THE PROPER MODE OF TREATMENT INDICATED

BY

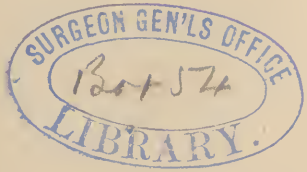
THOMAS ADDIS EMMETT, M.D.

OF NEW YORK

REPRINT FROM VOLUME I

Gynecological Transactions

1876



THE ETIOLOGY OF UTERINE FLEXURES, WITH THE PROPER MODE OF TREATMENT INDICATED.

BY THOMAS ADDIS EMMET, M. D.,

New York.

MR. PRESIDENT: My purpose in presenting to this Society the etiology of uterine flexures for discussion, is with the hope that it may be the means of establishing for our guidance the proper mode of treatment. Certainly much good must result from a full consideration of this subject; for, with the united experience of this body, the true course which a conscientious man should follow will be pointed out. Let us have the views and experience of those who have relied chiefly on the use of the knife; and, on the other hand, the mode of treatment from those who deprecate all surgical interference.

I doubt not the advocates of either extreme are equally conscientious, from their own stand-point, but we can only through their experience meet on some common ground. There are certain cases where the aid of surgical means has, beyond question, accomplished much, and where the surgeon would have failed in his duty had he neglected to give his patient its benefit. Other conditions have existed where a resort to the knife would have been malpractice, and it was proper to employ other means of treatment.

Let us begin at the commencement of menstrual life, and study the development and subsequent changes in the different forms of flexures. We may then be able to analyze the symptoms, to separate the cause of one flexure from another, and to appreciate the fact that their origin being different the proper treatment must vary with the form. Having this object in view, I have attempted with great care to analyze the records of three hundred and forty-five

cases of different forms of flexures which have been treated in my private hospital. I have not consulted the records of the Woman's Hospital to aid me, from the fact that they could not be so reliable, taken from the class of patients usually treated there. I have written the records of all these cases in private practice myself, and as they were from the higher walks of life, and intelligent, their statements are to be accepted as trustworthy.

Before presenting my own views of treatment, I must ask your kind indulgence while I attempt to elaborate these dryest of details. From such a mass of figures it has been a difficult task indeed to select only such points as seemed to have a direct bearing. Many of the results were only obtained after great labor, to find at last that no practical deductions could be drawn from them, except negative facts, and yet they are no less important to the student from this circumstance. Hearing these details read will doubtless tax your patience, and from their number render it impossible for you to retain more than their general bearing. But I hope hereafter, when they are placed before you in a more tangible form, that my deductions may not only be proved correct, but that other practical points, which I have overlooked, may be suggested by them.

I have tabulated, after several years' labor, the records of some 2,447 cases who had suffered from various diseases and injuries peculiar to women. The averages obtained from this source will be frequently used for the purpose of comparison. Therefore, when a general average is referred to as a standard, it must be understood as having reference to the total number, and not to the special condition.

The forms of flexure will be treated of in the following order: Of the cervix, at or below the vaginal junction, and of the body, forward, backward, and lateral, the last being probably but deviations from the other two forms of the body.

One hundred and eighty-two cases were found with flexure of the cervix, of which 62 were unmarried, 113 sterile, and 7 doubtful cases as to previous pregnancy.

There were 91 flexures of the body forward, of which 14 were unmarried, 42 sterile, and 35 were fruitful, so far as to have been impregnated. Twenty-nine were retroflexions, consisting of 9 unmarried, 7 sterile, and 13 fruitful. Forty-three were lateral, for 6 unmarried, 25 sterile, and 12 fruitful women.

On all flexures, 52.75 per cent. were of the cervix, and 47.24 per cent. of the body taken as a whole, or 26.37 per cent. for the body forward, 8.40 per cent. backward, and 12.45 per cent. for lateral flexures. The proportion of unmarried was 69.66 per cent. for flexures of the cervix, and 30.33 per cent. for flexures of the body. For the sterile, 59.78 per cent. were of the cervix, and 40.21 per cent. of the body. The fruitful were in the proportion of 10.44 per cent. for flexures of the cervix, and 89.55 per cent. for those of the body. Thus, of all flexures, 89 were unmarried, or 25.21 per cent. 189 were sterile, or 54.78 per cent.; and 67 were fruitful, or 19.42 per cent. The proportion for the total number of all flexures, on a general average, was 14.09 per cent. of all other conditions.

Of the total number of all females under observation, I have found, for a general average, that the unmarried were in the proportion of 17.20 per cent.; the sterile were 27.42 per cent.; and 55.37 per cent. for those who had been impregnated. In round numbers, the proportion of fruitful women, in my private practice, was more than twice as great as the sterile, and three times in excess of the unmarried.

On this basis we shall find the proportion of flexures among the unmarried to be 8.01 per cent. in excess, with an increase of 27.36 per cent. for the sterile, while for the fruitful the liability to flexure is 35.95 per cent. less than the relative proportion of this class on the general average. It is thus evident that the female who has been impregnated is rarely found with a flexure of the cervix, and, in comparison with other women, is but little liable to flexures of the body.

The proportion of flexures of the cervix, found among the

unmarried, was 34.06 per cent.; for the sterile, was 62.18 per cent.; and but 3.84 per cent. for the fruitful. Now if we take together the total number of the married women, with this condition of the cervix, we shall find the proportion will be 94.16 per cent. for the sterile. My convictions are that the proportion is even greater, since I have never met with a marked case of flexure of the cervix in any woman who had gone to full term. We find but seven females, in a total of 182 cases, with this form of flexure, where impregnation was supposed to have taken place. After going over the records of these cases, I find that in five instances the occurrence of a miscarriage had only been suspected by their physicians, while in but two cases had any mass or form been seen which may have been the product of impregnation. As it was not claimed that pregnancy had existed in either case longer than two months, the condition may be doubted from the difficulty in establishing the fact. My own belief is that future observation will settle the point that the existence of a flexure of the cervix should be proof that impregnation had never taken place.

The proportion of different flexures of the body to one another was 55.82 per cent. for the forward, 17.77 per cent. backward, and 26.38 per cent. for the lateral deviation. While 16.56 per cent. were unmarried, 46.62 per cent. were sterile, and 36.80 per cent. were fruitful. Anteflexions, in comparison with other flexures of the *uterus*, were found for the unmarried to be 15.61 per cent.; for the sterile 22.22 per cent.; and for the fruitful 51.79 per cent. If we now exclude flexures of the cervix, and make the comparison on those of the body alone, we shall find the proportion of anteflexions to be 51.85 per cent. for the unmarried, 55.26 per cent. for the sterile, and 58.33 for the fruitful. In other words, a little over half the number of all flexures of the body were forward for each class of females. But on the other hand, if we take the total number of anteflexions it will be found that the liability to this lesion is in the proportion of 15.38 per cent. for the unmarried, 46.15 per cent. for the sterile, and 38.46 per cent. for the fruitful in the

whole number of ninety-one cases. The number of the unmarried suffering from anteflexion is very nearly in the same proportion that this class bears to the total number in the general average already stated. The proportion of sterile women, however, is 18.73 per cent. in excess of that average, while that for the fruitful is 16.91 per cent. below it.

We have seen that retroflexions are comparatively rare, being but 8.40 per cent. of all flexures, and but 17.77 per cent. of those of the body. The relative frequency of retroflexures to the number of anteflexures is very nearly in the proportion of one to three, if the comparison be made on either the total number of all flexures or on those of the body alone. Quite different is the proportion for versions of the uterus, since the posterior position is as frequently found, if it be not even the more common. Twenty-nine cases of retroflexion were under observation, 7 being unmarried, 9 sterile, and 13 fruitful. These were in the following proportions to other flexures of the body: 25.92 per cent. unmarried, 11.84 per cent. sterile, and 21.66 per cent. fruitful. For retroflexions alone the proportion was 24.13 per cent. for the unmarried, 31.03 per cent. for the sterile, and 44.82 per cent. for the fruitful. Showing a slight increase of liability for the unmarried and sterile, with a decrease of over ten per cent. for the fruitful.

The lateral flexures were forty-three in number, being twice as frequent to the right as to the left for the unmarried, but with the reverse condition among the sterile, and five times more frequent to the left for the fruitful. Thus we have for the unmarried 4 to the right and 2 to the left; for the sterile 8 to the right and 17 to the left, and for the fruitful 2 to the right and 10 to the left, — in the whole number there being 14 to the right and 29 to the left. The proportion was 13.95 per cent. for the unmarried, 58.13 per cent. for the sterile, and but 27.90 per cent. for the fruitful. Showing a smaller proportion for the unmarried, with a twofold increase for the sterile, while the liability for the fruitful was lessened to about the same extent as the increase for the sterile women.

The average age of first menstruation for those with flexure of the cervix was 14.06 years, and with flexures of the body 14.11 years, and all flexures 14.08 years. The average of those unmarried with this lesion of the cervix was 14.01 years, and of the body 13.92 years; of the sterile 14.09 years for the cervix, and 14.32 years for the body; the fruitful averaged 13.85 years for the cervix, and 13.91 years for the body. These figures give but little indication that the age of puberty has any bearing on the form of flexures or of their existence at that time. The average age, however, for both flexures of the cervix and of the body is a little less than the general one, but this may be accidental. The general average age of the first menstruation was 14.14 years in all females; in the sterile 14.18 years, and in the fruitful 14.09 years. The average age of puberty for the total number with flexures is a little less than the general average in all women. The delay in development beyond the general average age of first menstruation, was as great for the sterile as this time was at an earlier age by comparison with the unmarried and fruitful. The only marked difference from the average age, for those with flexure under all conditions, is found among the females who had miscarried without giving birth at full time. The number is small it is true, being only *seven* cases of flexure of the cervix, who were supposed to have miscarried, and sixteen with different flexures of the body. The average for those with flexure of the cervix was 13.85 years, and for those of the body 13 years, and for the total number 13.26 years. Now the general average age of the first menstruation for 120 women, who had never gone to full term, and only miscarried, was 13.38 years, an age far earlier than the general average for all women of which these formed a part. As this difference is decided in both instances, and even so great as one year for flexure of the body when only miscarriages had occurred, the circumstance can scarcely be a coincidence.

We gain but little information by comparing the degree of regularity of the menstrual flow with the general averages. Differences exist between special flexures of the

body, but the averages for those with flexure of the cervix and with all flexures of the body differ but little from the average for all women. With flexures of the cervix 73.36 per cent. were regular from the first, 15.13 per cent. after a certain time, and 12.50 per cent. never were regular. With all flexures of the body 72.23 per cent. were regular from the first, 17.60 per cent. afterwards, and 9.15 per cent. were never regular.

With *anteflexures* 68.23 per cent. of women were regular from the first, 22.35 per cent. became so afterwards, and 9.41 per cent. were never regular.

With *retroflexions* 85.07 of women were regular from the first time, 10.71 per cent. became so afterwards, and but 3.56 per cent. were never regular.

This shows a marked difference in favor of the supposition that retroflexions take place in after life. While a much larger proportion was regular from the first, than is given by the general average, the number of those who were regular afterwards or who were never regular, is equally below the same standard.

With lateral flexures 75.86 per cent. of women were regular from the first, 10.34 per cent. became so afterwards, and 13.75 per cent. were never regular.

The want of regularity seems to have been some bar to fruitfulness. The number of sterile women and of those who had been impregnated, having flexure of the body, were about equal, but the proportion is too small in the whole number for any practical deductions to be drawn. But I find from the total number of all women under observation, that 197 given cases, or 9.00 per cent. had never been regular; of these 38.57 per cent. had been impregnated, while 35.53 per cent. were sterile.

Although the number of each class who were never regular is essentially the same, yet as the proportion of sterile and fruitful women was, in the total number of females, as one to two, the proportion of sterile is in excess.

The condition of menstruation as to regularity seems to have but little connection with the amount of pain experienced.

I find, after taking the average of 2,176 cases, that 13.63 per cent. had pain for a short time just at the beginning of the flow, 13.49 per cent. suffered pain during the flow, while 74.87 per cent. were free from pain. In addition, for comparison, I will state that of the above number 22.61 per cent., or 135 sterile women, and 8.52 per cent., or 105 fruitful women, suffered pain at the beginning of the flow. One hundred and fifty-one, or 25.29 per cent. of sterile, and fifty-nine, or 4.79 per cent. of fruitful women, had painful menstruation during or throughout the flow. While but 311 sterile women, or 52.09 per cent., in contrast to 1,067, or 86.67 per cent., of fruitful, were free from pain. Painful menstruation is thus not only, from its character, an indication of sterility, but, we shall also see, of the form of flexure.

Of 152 cases of flexure of the cervix, where the condition of menstruation was noted, 53, or 34.86 per cent., were unmarried, 97, or 63.81 per cent., were sterile, and two cases, or 1.31 per cent., were supposed to have miscarried. These flexures are about equally divided in the relative proportion of the unmarried and sterile in the general average. From the total number of these flexures, 91, or 59.86 per cent., suffered pain at the beginning of the flow, 15, or 9.86 per cent., had pain during the flow, while 46, or 30.26 per cent., were free from pain. Again, 26, or 49.05 per cent., of the unmarried, and 64, or 65.97 per cent., of the sterile, had pain in the beginning; 4, or 7.54 per cent., of the unmarried, and 11, or 11.34 per cent., of the sterile suffered during the flow, while 23, or 43.39 per cent., of the unmarried, and 22, or 22.68 per cent., of the sterile were free from pain. Thus we see, with flexures of the cervix, pain at the beginning of the flow is the rule and during the flow the exception. For the absence of pain in a certain number of cases we shall offer an explanation in another connection hereafter.

Anteflexures were 85 in number; 14, or 16.27 per cent., in the unmarried; 39, or 46.51 per cent., in the sterile; and 32, or 37.20 per cent., in the fruitful. Of these 4, or 4.70 per cent., had pain in the beginning of the flow, 44, or 51.76 per cent., during the flow, and 37, or 43.52 per cent., were free

from pain. The number with pain at the beginning is too small to allow of comparison, consisting of one sterile and three fruitful women. These cases I have no doubt began their menstrual life with flexures of the cervix, and the body of the uterus became involved afterwards. Fourteen, or 31.81 per cent., of the unmarried, 22, or 50.00 per cent., of the sterile, and 8, or 18.18 per cent., of the fruitful women suffered pain throughout the flow, while 16, or 43.30 per cent., of the sterile, and 21, or 56.75 per cent., of the fruitful women were free from pain. Thus all the unmarried, with the greater portion of the sterile and fruitful women suffered pain during the flow, showing this to be the rule, while pain at the beginning of the flow is the exception, in anteflexures of the body.

There were 28 cases of retroflexion of the body, six of these, or 21.42 per cent., were in the unmarried, nine, or 32.14 per cent., in the sterile, and thirteen, or 46.42 per cent., in the fruitful. Four, or 14.28 per cent., had pain at the beginning, six, or 21.42 per cent., during the flow, and eighteen, or 64.28 per cent., were free from pain. The proportion of fruitful women was the largest, and absence from pain the rule.

The lateral flexures were 29 in number, with four, or 13.79 per cent., in unmarried, eighteen, or 62.06 per cent., in sterile, and seven, or 24.13 per cent., in fruitful women. Of the total number nine, or 31.03 per cent., had pain at the beginning, eight, or 27.58 per cent., during the flow, and twelve, or 41.37 per cent., were free from pain. The greater portion were sterile and over half the number suffered pain in either the beginning or during the flow in after life, but, in the total number, more were free from pain in early menstrual life than was the case with either the unmarried, sterile, or fruitful separately.

The average length of menstruation at puberty was 4.76 days in all cases of flexure of the cervix. But the slightest variation existed in the average time between the unmarried and sterile. As there were but two women who were supposed to have been impregnated, all comparisons will be

made between the two other social conditions. The flow lasted, with those who were regular from the beginning, 4.80 days; with those who were never regular, 4.33 days; while the average for those who became regular afterwards varied but little from that of the whole number. The existence of pain prolonged the flow to 4.89 days, while it lasted 4.18 days in those who did not suffer. Menstruation in 47.37 per cent. of all the cases, with flexure of the cervix, remained unchanged in every respect from the condition at the beginning. Thus there were forty-four cases where the flow was always normal, as to quantity, with an average of 5.04 days of duration. Twelve cases were always too free, as they had been from the beginning, but the time remained unchanged and lasted 6.41 days, and with sixteen other cases the flow was always scanty, lasting but 3.12 days. In this group of cases, where no change took place in after life, the average length of normal menstruation for the unmarried was 4.40 days, and for the sterile 4.85 days.

Again, with 44 cases, or 28.94 per cent., forming a second group, the time remained the same as at the beginning, but the quantity became either increased, lessened, or irregular in after life. Thus in thirteen cases, where the flow always lasted 4.61 days, the quantity was increased; in 26 cases the period lasted 4.11 days, but the quantity became less, and in five cases, lasting 3.80 days, it became irregular. The average duration of flow for this class was 4.23 days.

We find this result, that in the whole number of flexures of the cervix 76.18 per cent., consisting of the first and second group, remained in after life the same as to the length of menstruation, but with a certain number of cases the quantity became changed.

The third group, consisting of 17 cases, or 11.11 per cent. of the whole, was formed of those in which the duration of the period became lengthened while the quantity either increased or lessened. In sixteen cases of this group it was increased to 6.31 days, and in one instance, although the time was increased to five days, the quantity became less. The average duration of the whole group in after life was 6.23 days.

The fourth group consisted of 19 cases, or 12.50 per cent. of the whole, where the time became shorter in after life and the quantity was also changed. The menstrual flow in eighteen of these cases was reduced to 3.22 days, and in one case to four days, the quantity becoming irregular. The average length of the period for the group was 3.26 days.

The average length of the menstrual flow in after life for all cases of flexure of the cervix was 4.62 days. For the unmarried it was 4.47 days, for the sterile 4.71 days, and for the two cases of miscarriage 4.50 days.

The average duration of flow at the beginning of menstrual life, in the total number of those who suffered from anteflexure, was 4.90 days, and from this average there was but the slightest variation for either social condition. Those who were regular from the first menstruated 4.97 days, when regular afterwards, five days ; while we note, as in flexures of the cervix, the same decrease in the average duration for those who were never regular, it being 4.30 days for this condition ; when attended with pain the length of flow was slightly increased above the average. When pain occurred at the beginning of the flow the average duration was 4.89 days, with pain during the flow the time was increased to 4.97 days, the average being 4.87 days for those who were free from pain.

In only 11 cases, or 12.94 per cent., the menstrual flow remained unchanged in after life. In this first group, as in flexures of the cervix, when the time remained unchanged, the average duration for the cases, normal as to quantity, was 5.12 days ; for those who were too free 4.50 days, and for the scanty three days, while the average for the group was 4.81 days.

The second group consisted of forty cases, in which the duration of the flow remained unchanged in after life. But in fourteen of these the quantity was increased when the average length of the period had been 4.85 days. Twenty-three females averaged 4.37 days, but the quantity had been lessened. In the remaining three cases the average was but 3.66 days, the quantity afterwards becoming irregular. For

the whole group the average length of the menstrual flow was 4.48 days.

Thus in 51 cases, or 60 per cent., of the anteflexures, including the first and second groups, the length of flow remained unchanged from puberty. In after life a larger proportion remained unchanged as to duration, but a smaller one with respect to quantity than was the case in flexure of the cervix under the same circumstances.

Fourteen women, or 16.47. per cent., forming the third group, had the time lengthened, with the flow increased in nine cases; lessened in three; and irregular in two instances, the average of the whole being 6.31 days.

The fourth and last group consisted of 20 cases, or 23.53 per cent., in whom the time was shortened and the quantity changed. Thus with 16 cases the flow was lessened; in one instance it was increased, and in three females it became irregular in quantity, but the average on the whole was lessened to 3.50 days. The average length of menstruation in after life for the unmarried, who at that time suffered from flexure of the body forward, was 4.64 days; for the sterile 4.53 days; and for the fruitful 4.75 days, with an average of 4.63 days for the whole number of those with anteflexure. This average is essentially the same as that found for flexures of the cervix with the same general diminution in the length of the period. This change is more marked in the sterile, while in those with flexure of the cervix the lessening was greater for the unmarried.

In those with flexure of the body backward the average length of the first menstruation was 5.02 days. In those who were regular from the first 5.12 days; in those who were regular afterwards it was 4.75 days; and in those who were never regular, the average was but two days.

We have already stated the fact that with this form of flexure over 85 per cent. of women were regular from the first and but 3 per cent. were never regular. The average length of period for so small a number cannot be accepted alone, yet the law is, as has been previously stated, that in all cases of flexure where menstruation has never been reg-

ular, the length of flow is always far below the general average.

In the total number of those with retroflexions the average length of first menstruation of the unmarried was 3.66 days, of the sterile 5.33 days, and of the fruitful 5.50 days. From some unknown cause the average for the unmarried is far below that for either of the other conditions. Those who suffered pain in the beginning of the flow averaged 5.25 days; those during the flow 5.33 days, and for those who were free from pain, the average was 4.09 days. This shows, as in other cases of flexure, that the existence of pain always prolonged the time of flow.

Ten cases of retroflexion, or 35.71 per cent., forming the first group, remained unchanged, as regards the menstrual flow, both in time and quantity. Eight of these were normal with a flow of 4.62 days; one case was too free, and one scanty, each menstruating five days; but the average in the whole group was 4.70 days. There were eleven cases, or 39.28 per cent., forming the second group, where the time also remained unchanged. Of these five had the quantity increased, menstruating 5.40 days; five others had it lessened, the flow lasting 4.40 days; and one became irregular but continued to menstruate four days; while the average for the whole was 4.81 days. By taking together the two groups it will be found that 75 per cent. of the whole number of retroflexures remained during after life unchanged in the length of the menstrual flow, although the quantity varied somewhat.

The third group, in which the time was increased and quantity changed, numbered but a single case, or 3.57 per cent. of the whole, the flow being increased to nine days.

The fourth group consisted of six cases, or 21.42 per cent., where the duration of flow became shortened. Five of these had the quantity lessened to three days and one increased to six days. The average for the group was 3.50 days.

For all unmarried women, with flexure of the uterus backward, the average length of menstruation, in after life, was 3.33 days; for the sterile it was 4.55 days, and for the fruit-

ful 5.30 days, and for the total number for all women, 4.64 days. It will be noticed that, from some unappreciated cause, the length of flow for the unmarried continued in after life below the average of either the sterile or fruitful, although the difference was not so great as we have shown existed at puberty.

The length of the menstrual flow became lessened for each social condition from that existing at puberty. But it is a remarkable fact that the average duration in after life should be essentially the same for flexures of the cervix as for those of the body, either forward or backward. We have seen that for the cervix the average was 4.62 days in after life, while for the same period it was 4.63 days in anteflexures, and 4.64 days in retroflexions. The average length of the menstrual flow at puberty for all cases of lateral flexures, was 4.58 days. For the unmarried it was 4.59 days, for the sterile five days, and for the fruitful 4.60 days. Those who were regular from the first averaged 4.85 days; who were regular afterwards 4.33 days, and those who were never regular, two days.

Sixteen cases, forming the first group of lateral flexures, or 55.17 per cent. of the whole number, remained unchanged both as to time and quantity of the menstrual period. Eight of these were normal and menstruated on an average five days. Two were always too free, lasting 8.50 days; and six were scanty with a flow of 3.16 days; the average for the whole was 4.12 days.

The second group consisted of six cases in whom the length of period remained unchanged, but in four of these, averaging 5.25 days, the quantity was increased, and in the other two instances lessened, while their habitual period remained 4.50 days; the average length of flow for the group was five days. The proportion was 75.85 per cent. based upon the whole number of lateral flexures of those in whom the length of period remained unchanged in after life.

In the third group, where the time was lengthened and quantity changed, the flow was increased to 8.33 days, this being the average of three cases.

There were but four cases in the fourth group, in which the time became shortened and the quantity changed, and in these, the average duration was lessened to 3.25 days.

The average duration of the menstrual flow in after life for the unmarried, who suffered from lateral flexures, was 6.75 days; for the sterile 4.50 days; and for the fruitful 5.14 days.

For the purpose of comparison I will briefly state the average length of menstruation, under various circumstances, as obtained from 2,080 women, these being the total number under observation, from whom I could obtain the information. At puberty the average for those who were regular from the first was 4.85 days; who were regular afterwards, 4.89 days; and for those who were never regular, 4.44 days. For those suffering pain in the beginning it was 4.84 days; during the flow, 5.04 days; and for those who were free from pain, 4.77 days. The average for the unmarried was 4.65 days; for the sterile, 4.74 days; for the fruitful, 4.91 days; and for the total number it was at puberty 4.82 days.

The conditions of menstruation for the same persons in after life were as follows: For those who had been regular from the first the average length of flow remained unchanged. It lessened to 4.81 days in those who became regular after a certain time, and in those who were never regular, to 4.36 days. The average was also less for those who had suffered painful menstruation. Where there had been pain at the beginning of the flow it was reduced to 4.66 days, and during its continuance, to 4.87 days. On the other hand, for those who had been free from pain, the average was increased to 4.81 days, in after life. In the unmarried, the duration of flow was greatly reduced among those who had suffered from dysmenorrhea, but proportionately lengthened in those who had been free from pain; so that, in after life, the average stood at 4.67 days — being a very slight increase from the average at puberty. The same law was observed in the sterile, where pain had existed with the flow, while the average remained exactly the same, during after life, in those who had been free from pain; but the average

was reduced to 4.63 days in the whole number. Among the fruitful women, however, the average was somewhat increased for those who had suffered pain in early life at the commencement of the flow, — a contradiction, apparently, to the rule observed among the sterile and unmarried women; but this is easily explained on the supposition that a large proportion of cases, who suffered pain at the beginning, had, I have no doubt, a moderate degree of flexure of the cervix, but became pregnant afterwards, by which the mechanical obstruction was removed and the duration of flow increased. For those who had suffered pain during the flow in early life, the average was reduced as in the unmarried and sterile under the same circumstances, but it was also increased in duration in those who had been free from pain, so that the average for all fruitful women was increased to 4.93 days. The average in the total number of women was 4.66 days in after life, a reduction from the average of 4.82 days, which we have seen was the one existing under like circumstances at puberty.

If we accept these general averages as standards, it will be seen that under all conditions, both at puberty and in after life, the length of menstruation is much less for those who have flexures of the cervix. As a rule, the contrary is the case for flexures of the uterine body, for the averages at puberty are much higher than the general ones, but in after life the difference is not so great. In this connection I must ask you to keep in mind the fact, that the duration of the menstrual flow is always lessened in proportion to the amount of pain suffered. This has its bearing in indicating the existence of flexures of the cervix at the time of puberty, and, if accepted, it is of equal importance to prove that those of the body are formed in after life.

The time of marriage seems to have had but little bearing in either class of flexures, or at least none where there existed flexure of the cervix. The chief point of note being the fact that the average age of marriage was a little later than the general one. The average age for the sterile was 21.81 years in all cases of flexure, and for the fruitful, 22.31

years; while the general average in all women under observation was 19.82 years. Either extreme of age, however, may have had an indirect bearing. For instance, the average age of marriage in the sterile with lateral flexures was 19.20 years, and in those who had been impregnated, 25.75 years. Among the sterile there were seventeen flexures to the left, and the average age of marriage in these women was 17.11 years. This is the lowest average of any one class, yet a high one, since several women were somewhat advanced in life on the one hand, and on the other the greater number were much below the average given, one having been married at fourteen years of age. In eight of these cases evidence of previous cellulitis was detected, a condition very frequently found with lateral flexures. The highest average age of marriage for any particular class was found in those who had gone to full term, generally but once, and had had miscarriages frequently afterwards. Seven of these had anteflexures, three retroflexures, and six lateral flexures to the left. The average age of marriage for these cases was 28.43 years, and was doubtless an exciting cause of miscarriage and the consequences.

The average age at the time of the first examination, for all cases of flexure of the cervix, was 24.80 years. For the unmarried, 23.42 years; for the sterile, 25.02 years. The duration of the sterility was 3.21 years. There were but two cases of supposed pregnancy, in which miscarriage had taken place at an average of 8.50 years previous to the first examination.

The average age for those with flexures of the body forward was 27.94 years. The unmarried averaged 23.97 years; the sterile, 28.78 years; and the fruitful, 31.28 years. The average length of time since marriage was, for the sterile, 7.61 years; and since the last pregnancy, for those who had borne children, it was 7.63 years; for those who had only miscarried, 6.20 years; in two cases, due to criminal abortion, four years had elapsed.

The age of those suffering from retroflexions averaged 30.68 years; of the unmarried 29.22 years of age; of the

sterile, 24.25 years ; and of the fruitful, 34 years. The average length of time since marriage was 3.44 years in the sterile ; since the last impregnation, for those who had gone to full time, 7.46 years ; for those who had miscarried, 5.83 years ; and after one case of criminal abortion, five years.

The average age of first examination, for the total number with lateral flexure, was 31.37 years ; that for the unmarried being 33.50 years ; for the sterile, 30 years ; and for the fruitful, 31.40 years. The time since marriage, for the sterile, was 6.86 years ; one female had gone to full term and remained sterile for 13 years. In those who had miscarried, 5.66 years, on an average, had elapsed ; and in one case of criminal abortion the woman had not been again impregnated during five years.

With all flexures of the body the average age, at the time of first examination, was 25.88 years for the unmarried ; for the sterile, 28.57 years ; and for the fruitful, 32.35 years.

It is a remarkable fact that the average age at which relief was sought should bear an inverse proportion to the frequency of the form of flexure. This would indicate, if no other proof existed, that flexure of the cervix, the most numerous class of all, was a condition of puberty and early life, since relief is sought at the earliest age ; that anteflexures follow soon after, while retroflexures and the lateral ones, being less common and found in about the same proportion, are developed in later life.

As forming a part of the history of flexures, it will be of interest to record the supposed causes of disease as given by the patients themselves. In 22 sterile women with flexure of the cervix, who had commenced their menstrual life free from pain, five cases are recorded as having suffered, sooner or later after marriage, from dysmenorrhea during the flow. The same result followed in one case from exposure to cold, in another instance from the use of a sewing machine, and one of the fruitful had been well until the time of her supposed miscarriage. Among the unmarried, 23 cases were free from pain at the beginning, and attributed their dysmenorrhea in after life, in two instances, to the effects of

cold; in two to over-study while at a boarding-school; and in one to the result of a fall. All of these cases, when first seen, had, in addition to the flexure of the cervix, hypertrophy and more or less disease of the body, with some degree also of flexure above the vaginal junction. This would leave 33 cases, or over two thirds, who were free from pain in after life, — too small a number to be of great statistical value, but an indicator of the fact that a certain proportion of flexures of the cervix are unattended by dysmenorrhea during after life, unless other disease be developed.

Of 85 patients who suffered from anteflexures, 64 attributed either the origin or aggravation of their dysmenorrhea to the following causes. Eighteen sterile women suffered after marriage from venereal excess, and eight from the effects of cold. Twenty-four fruitful women, the total number of those who had been free from pain, or only had it at the beginning of the flow, suffered from the following causes: Five from natural labors, two from tedious ones, and one from instrumental delivery; twelve had miscarried, two were the victims of criminal abortion, two were worse after falls, and one from fright. Seven unmarried women took cold and suppressed the menstrual flow: three were taken sick from over-study at boarding-school, three suffered from falls, and one from dancing at the time of the period.

Had it been possible to have obtained the facts, I am satisfied that the unknown causes of anteflexure, among the sterile and a portion of the fruitful, might have been supplied from the following causes: Means taken to prevent conception in early married life by the sterile and by those who had already borne children; many ill assorted marriages; and mental disquietude.

Of those with retroflexion, five sterile women, who had been in good health previously, grew steadily worse after marriage, one suffered from exposure to cold, two were taken sick at boarding-school, and for the remaining case there was no cause of disease known. All the fruitful women with retroflexions were the worse for impregnation. Five were sick after childbirth, seven after miscarriage, and

one after the production of a criminal abortion. An attack of cellulitis followed childbirth in three cases, and in each instance after miscarriage and abortion. One unmarried woman was taken sick at boarding-school, another from exposure to cold, and two cases suffered after falls, — thus we have accounted for all but three cases.

Three sterile women with lateral flexures became sick immediately after marriage, one fruitful woman after childbirth, three after miscarriages, and one after criminal abortion. One unmarried woman suffered from exposure to cold.

Flexures of the cervix have their origin at about the age of puberty by the balance being lost between the relative growth of the body and cervix. From the earliest development of the uterus until pregnancy some degree of anteversion exists as a rule. With the uterus in this position the neck cannot be developed to an undue length without forcing the cervix forward in the axis of the vagina where the least resistance is offered. As the body lies forward, the cervix must become bent upon itself at, or near, the vaginal junction, and thus the flexure is formed. This condition must exist or the uterus will become retroverted, the result being determined by the fullness or absence of the posterior *cul de sac* of the vagina. If the cervix is small enough in diameter to be readily bent upon itself, the flexure takes place ; but if the contrary be the case and the *cul de sac* be small, retroversion of the organ will occur. As the growth is not always completed at the time of the first menstrual period, a female may begin with flexure of the cervix and afterwards from retroversion have retroflexion. With flexure of the cervix, the neck always becomes longer in after life than it was at puberty, from being crowded forward in the vagina, which condition will frequently produce retroversion.

The rule as regards pain, is that it exists previously to the appearance of the flow, and then ceases, or becomes much less. If the degree of flexure is slight, there may be an absence of pain, with as little feeling of discomfort as any female suffers at this time, or the pain may not come on

until after the flow has become fully established. When pain, at puberty, is experienced during the flow, a condition already exists in the body of the uterus which is likely to give trouble in future and to result in anteflexure. As a result of the congestion attending menstruation, the flaccid and elongated cervix becomes thickened and shortened so that the uterine canal is then nearly straight, since the cervix is strong enough to resist the pressure of the posterior wall of the vagina. Therefore the dysmenorrhea existing just at the beginning is relieved, and if the flexure be not extensive, impregnation frequently takes place in early married life just before the menstrual flow, or even while it exists. With a knowledge of this fact I have sometimes recommended that sexual intercourse should take place when the period was expected or just before it had ceased, and have known several instances where long standing sterility, from this form of flexure, has been thus removed.

I am unable to recall any other condition where menstruation, being painful at the beginning, is relieved so promptly when the flow becomes established. This may therefore be regarded as a characteristic symptom of a simple uncomplicated flexure of the cervix. As 8.52 per cent. of 1,231 fruitful women suffered in early life from pain at the beginning of the flow, we may assume this to be about the proportion of cases in which impregnation is likely to have taken place with flexure of the cervix. We have no other means of arriving at any conclusion on this point, since a flexure of the cervix is never found after a female has gone to full term.

The chances of impregnation are lessened rapidly after the first year of married life, since we are likely to have disease of the body and ovarian irritation established in the course of time, as nature's protest at the childless condition of the married female.

Hypertrophy and anteflexure of the uterus come in after life, from some exciting cause, when I have observed the gradual disappearance of the flexure in the cervix, as the

uterus enlarges and the flexure is formed in the body above. The sterility, however, continues to exist, since the condition which has become established is even a greater bar to impregnation than the previous one. In other cases some degree of flexure will remain in the cervix with a flexure also of the body above. Menstruation will then not only be painful before the flow comes on but it will continue so throughout, and, if a sufficient amount of ovarian disturbance has been set up, it will be even worse after the flow has ceased.

If we are able to draw any deduction from the analytical history of anteflexures, which I have furnished, it is unequivocally to the effect that this condition has its origin after puberty, and observation indicates it to be the result of obstructed circulation from impaired nutrition. Painful menstruation, during the flow, may occur under other conditions, but it is never absent in any form of flexure of the uterine body either forward, backward, or laterally. When a female has been free from pain in early life, and anteflexion has been discovered afterwards, it is my firm conviction that in such a case the uterus was in a normal condition at puberty. When pain has occurred at this early period in the beginning of the flow, becoming with its progress intensified and lasting until it has ceased, a flexure of the body forward has not existed, but a condition which engendered the flexure afterwards. With pain, at this period of life, just at the commencement of the flow and relieved when fully established, a condition exists which has been already explained.

Retroflexions are, I believe, deviations from a previously existing retroversion. While they are always aggravated by an obstructed circulation, as in the case of other flexures of the uterine body, the exciting cause is inflammatory action, not in the organ itself but in the connective tissue of the pelvis and ligaments of the uterus. From a moment's reflection it will be evident that the uterus may be retroverted to a point at which the broad ligaments, being already on the stretch, may by inflammation become shortened so as to produce the flexure. This action may be also aided, with

shortening of the broad ligaments, by inflammation in the utero-sacral ligaments. When a point in the version has been reached at which the anterior wall of the vagina can no longer yield to the upward pressure of the cervix, any contraction of these ligaments will increase the degree of retroflexion. Since inflammation of the neighboring cellular tissue of the pelvis is, I believe, almost always, if not invariably, an accompaniment of retroflexion, these ligaments become necessarily more or less involved.

Lateral flexures, as has been already stated, are thought to be formed in after life as the result of shortening of the broad ligament after inflammation on the side of the flexure, a version having previously existed either forward or backward. I have never met with any evidence, conclusive enough to settle the point, that they are ever congenital; and since they are found to the left in about the same proportion as cellulitis occurs on that side, in comparison with its frequency to the right, I am confirmed in the opinion.

The length of menstruation in all forms of flexure becomes shortened, but the process is a very gradual one, as a rule. The quantity, however, especially in the sterile, is generally increased for a while and then gradually diminishes. Often from atrophy of the uterus the flow will cease at a comparatively early age and will then be followed by the development of phthisis, if there be the slightest tendency to the disease. When the flexure is situated in the cervix the changes are more gradual than in any other form; this is particularly true with regard to the unmarried. Long before nature desists from her efforts, or atrophy has commenced, fatty degeneration will take place at the seat of flexure. An absorption of tissue is brought about by pressure at the seat of flexure and a permanent deformity remains. The mechanical result is the same as after recovery from the breaking down of the spongy portion of the spinal column from caries; the curvature is likewise in proportion to the loss of structure.

During the past fifteen years I have devoted much time and study to this subject. Before the year 1865 I had ar-

rived at about the same views of pathology I hold to-day and nearly the same in regard to the treatment of flexures. I then read a paper on the "Treatment of Dysmenorrhea and Sterility resulting from Anteflexure of the Uterus," before the New York Obstetrical Society, which was published in the "New York Medical Journal" for June, 1865. In 1869 I presented another paper to the Medical Society of the County of New York, termed "Surgery of the Cervix," which was published in the "American Journal of Obstetrics" for February, 1869. In this paper my views, as stated, had undergone no material change by greater experience beyond the fact that I had learned to narrow greatly the field for surgical interference. I was then prompted to raise my protest against the indiscriminate use and abuse of this mode of practice. Again in 1874, before the Medical Library and Journal Association of New York, I read a paper on "The Philosophy of Uterine Disease, with the Treatment applicable to Displacements and Flexures," which was published in the "New York Medical Journal" for June of that year.

As I cannot express my views of to-day in better terms I will quote from those papers and especially from the recent ones, which I hope exercised at the time some influence in bringing about a more rational mode of treatment.

In 1865 I stated, "A large hospital experience led Dr. Sims, some years ago, to abandon all methods as unsafe and negative in result, for the relief of this condition, except the incision of the neck as proposed by Professor Simpson. My experience has fully corroborated his teaching; we agree perfectly in principle, and only differ in the method by which it should be done. His ingenuity suggested an incision of the posterior lip directly backward in the median line; but after a few operations he abandoned this method as unsatisfactory. By subsequent observation of these cases, I satisfied myself that they could not be permanently relieved by either operation, as the seat of difficulty was entirely above the point reached by the incision." "I am satisfied that neither operation will permanently relieve any case unless the flexure is confined to the neck and is below the

vaginal junction. While the backward operation, as proposed, would relieve a moderate flexure, the lateral one, however, even if extended on each side to the vaginal junction, could not accomplish so much, unless the posterior flap, in the process of healing, retracted sufficiently to clear the seat of stricture, which it could not do. The dysmenorrhea invariably returns after a few months, as soon as the mere revulsive effects of the operation have subsided."

My views at that time were that a much larger proportion of flexures needed the operation, but rather to facilitate the after treatment of the canal than for any other object. I then described the operation for cutting the upper angle of the flexure, in the anterior wall, thinking that the cause of failure in many cases was due to the seat of flexure not being reached. After giving the necessary after-treatment, the instruments needed for the operation were described, which are the same as I use to-day.

I stated, "I have for several years in this, as in all other operations of obstetrical surgery, substituted, as far as possible, the use of the scissors for the knife. Although they may be deemed less surgical, I have satisfied myself that I can operate more rapidly, and certainly have experienced less hemorrhage with them. The scissors that I have been in the habit of using for this operation are flat on the face, but have the blades curved at an angle from the handles, so as to conform somewhat to the direction of the uterine canal. Simpson's uterotome is not applicable to this operation and cannot be used except where the canal is straight. Dr. Sims introduced an instrument having a narrow cimeter-shaped blade, about an inch and a half in length, which answered admirably for the purpose; but having a single joint, the blade can only move in the one plane and to cut in the opposite direction it is necessary to have a second instrument with the reverse. This difficulty led me several years ago to have an instrument made with the same shaped blade but terminating in a ball at the seat of the joint and separate from the instrument. The handle, being contrived like a pair of forceps, grasps the blade firmly in a socket at

the required angle. It being, in fact, a universal or ball and socket joint, the blade may be used in any direction and it is a valuable instrument for other purposes."

The only use I made of the knife, at that time or since, was for dividing the upper angle beyond the reach of the scissors.

From the paper on "Surgery of the Cervix" I quote:—

"As the uterus is an erectile organ, the existence of a flexure, and one frequently varying in degree, may be due to a temporary interference with the circulation from faulty nutrition. In these cases the flexure is above the vaginal junction, and unless the disease has been of so long standing that a loss of substance with fatty degeneration from pressure has taken place in the angle, the curvature will lessen in proportion to the relief of the local disease; therefore surgical interference would be unjustifiable in this chordee, as it were, of the organ, except as a last resort after careful constitutional and local treatment had failed to relieve the condition."

"Such is not the case, however, when the flexure is below the vaginal junction; here we find the body of the uterus in position at a right angle to a long and pointed neck presenting in the axis of the vagina. This condition I regard as congenital, or rather having its origin previous to puberty, when an undue development of the neck has taken place in proportion to the body. Both dysmenorrhea and sterility, as a rule, exist in this condition, with but little or no uterine disease until at a somewhat advanced period of married life. This is the commonest cause of sterility when due solely to a mechanical condition, and when the neck can be divided at an early period of womanhood the result has invariably proved in my experience most satisfactory. After some years of married life we have a condition, in addition, to deal with, due to ovarian influence: the uterus having been long obstructed in a natural performance of its function, atrophy results. The cervix should be divided as a first step, for even at an advanced period the organ may yet be restored to a proper size and to a normal state of its function by means

of sponge tents, electricity, and other means. I am unable to speak from statistical authority, for it has been impossible to keep any satisfactory record of scattered cases upon which I have operated during a series of years past for flexure below the vaginal junction; but my impression is that fully two out of three among the married, under the age of twenty-five, have become pregnant within the first year after the operation, and that the relief of dysmenorrhea has been quite as satisfactory."

These results are only gained in the simple, uncomplicated cases of flexure of the cervix, such as we find shortly after marriage, before any form of uterine disease has supervened, and to these cases alone is reference made.

"Formerly I divided the anterior lip in the median line for the relief of dysmenorrhea depending upon retroflexion, and, at least in theory, the operation seemed quite as applicable as the other one in anteflexion; but I have long since abandoned the operation, for reasons which I will subsequently state. We rarely find an instance where the fundus has remained in the hollow of the sacrum for any length of time without a marked exaggeration of any previous disease existing, while, in addition, there becomes established some new complication of a more serious character, due to obstructed circulation. As the fundus is crowded by degrees lower in the pelvis from pressure above, the organ becomes flexed as we have already remarked. If menstruation did not occur, the difficulty would remain a mere mechanical one, but as this function cannot be properly performed, the flow, with dysmenorrhea, is either excessive or scant. In either condition, the organ and surrounding tissues remain in a state of chronic engorgement, and as a consequence this state of the circulation cannot long exist without the occurrence of perimetritis, and frequently pelvic cellulitis, to a greater or less extent. When the organ remains retroflexed, and this inflammatory condition has been once established, it seldom, I believe, subsides entirely during the menstrual period of the female, or at least it requires but a slight provocation to light up again the dis-

ease. I have had, to my sorrow, pelvic cellulitis with abscesses frequently occur, and death in one instance, after the most careful preparatory treatment previous to operating, when, at the time, there was not the slightest indication of danger. In fact I am unable to recall a single instance where inflammatory symptoms did not occur if an attempt was persevered in to keep open the incision while the uterus remained in this position. Retroflexion, however, can be cured by the long-continued use of hot water injections and hot baths, blistering the neck occasionally to deplete by the watery discharge, daily glycerine dressing, and by a careful attention to the state of the bowels and general condition. By degrees, as the tenderness on pressure subsides, the fundus should be lifted day after day, as far as prudent, without attempting too much at any one time, with a finger of one hand in the rectum to lift the fundus and gently press the organ forward from out of the hollow of the sacrum ; the cervix can be depressed in the opposite direction by a finger of the other hand in the vagina. I have succeeded, after months of careful daily manipulation, in restoring the uterus to position, with the gradual disappearance of a marked flexure, when in the beginning the organ was apparently bound down by adhesion."

I shall now make some extracts from the paper on "The Philosophy of Uterine Disease" in regard to the operation and frequency with which it has been performed. As this paper was prepared in 1874, at the time when I had already commenced to collate the material from which the statistics of this article were taken, all reference to my private practice will be in connection with the same class of patients.

"For the relief of the flexure at the vaginal junction, I always divide, with scissors, the posterior lip backward in the median line. This operation is attended with but little risk, if the case is properly cared for, from the fact that the organ is otherwise in a comparatively healthy condition ; unless the history of the case points to the existence of a previous attack of cellulitis, resulting from some accidental cause, there will be but little danger of this complication from the opera-

tion. Quite the contrary will be the case when the body has been involved in either anteflexion or retroflexion of long standing, for a certain amount of perimetritis is almost certain to have existed at some previous date, leaving a condition afterward requiring but a slight provocation to re-establish the inflammation in a more serious form. The ultimate result of the operation is to bring the neck to a natural length, for, by a division of the circular fibres, the longitudinal ones gradually retract, and the canal becomes straight; were other advantages equal, the backward operation is preferable to the lateral one, as the cervix is divided only on one side, and the risk from hemorrhage is less, as the circular artery can be easily avoided. Moreover, there will be no gaping or rolling out of the edges, after they have healed, as the flaps are kept sufficiently in contact by the lateral walls of the vagina. Although there may be no bleeding at the time of the operation, the use of a tampon for some ten days is a necessary precaution to guard against subsequent hemorrhage. The incision must be kept open by gently drawing the point of a sound through the angle of the wound, and the edges apart by daily dressings of cotton pledgets saturated with glycerine. To guard against inflammation, it is indispensable that the patient should be kept in bed, and protected from cold, until the parts have healed. The object of the operation is to remove a very common cause of sterility, and one liable to result in retroversion, from sexual intercourse, with prolapse afterward, so soon as the body becomes forced over in line with the axis of the vagina. In the unmarried the dysmenorrhea is relieved by the operation, the tendency to retroversion obviated by shortening the neck, and an exciting cause of future disease removed by allowing a free escape of the secretions from the canal."

"When a flexure of the body has long existed, the tissues at the point of greatest constriction gradually undergo fatty degeneration from pressure, and absorption takes place, causing a permanent deformity, as after caries of the spine. When a point has been reached, after careful treatment of

such a case, at which all tenderness on pressure has been removed, it is often judicious to divide the cervix backward, and to incise forward the seat of flexure above, sufficiently to open the canal. This will facilitate the application of any after treatment which may be found necessary to the canal above, and guard against a relapse from any mechanical obstruction afterward. But, if done too soon, without the proper preparation and the requisite subsequent care, all previous gain will be lost by pelvic cellulitis, and even general peritonitis may result."

"During the time I held the position of surgeon-in-chief to the Woman's Hospital, from September 1, 1862, to May 1, 1872, there were 1,842 patients treated under my charge. This operation was performed sixty times in the institution, as will be seen by the following statement taken from the records and furnished me by Dr. William H. Baker, the house-surgeon: From September 1, 1862, to the close of the year, eight operations; 1863, nine; 1864, six; 1865, four; 1866, three; 1867, three; 1868, five; 1869, six; 1870, thirteen; 1871, one; 1872, to May 1, two. During the year 1870 four lateral operations were performed for the removal of fibroids, making a total of fifty-six operations for flexure of the cervix."

"Three cases of serious cellulitis followed these operations, but from which complete recovery took place; one death occurred from general peritonitis, coming on after the patient was well enough to be up, and it could be attributable alone to her own imprudence."

"During the past thirteen years I have operated some forty-nine times in my private hospital, and have in the same period treated 2,036 uterine patients, with one death, and one serious case of cellulitis terminating in pelvic abscess, from which recovery took place after an illness of two years. The cause of death was peritonitis, occurring in a patient upon whom I operated the day after her arrival from a long and fatiguing journey, to oblige her physician, who wished to return home without delay. I have since held myself culpable for the death of this patient, so far as to have

deviated from my rule of never operating until a patient has been sufficiently long under observation for me to appreciate fully her condition and to prepare her properly for the operation. The pelvic abscess, following an attack of cellulitis, was brought about by the patient's imprudence in sitting up and exposing herself to cold in a night-dress, and bare feet. To the best of my recollection, I have performed this operation but twice outside of my private hospital, and in both instances the patients remained under the charge of their physician. One of these patients, on whom I operated for retroflexion, died ultimately from the effects of a pelvic abscess. It occurred some years ago, before I had learned from experience that in cases of retroflexion a certain amount of cellular inflammation has previously existed, and that its products are seldom if ever absent so long as the organ remains in this position. The lady was a foreigner with whom I was unable to hold any personal communication; the operation was performed at a large hotel where she did not get the proper care, and I have no doubt she suffered from exposure."

"The number of cases treated in private practice has been given, that they may be added to those cared for at the hospital, from the fact that many of the patients were sent to the institution by me specially for the operation — as otherwise the proportion would be too large. The ratio to the whole number treated can be but an approximation, however, since I can give no estimate of the number seen by consultation in private practice, or with accuracy the number treated in the outdoor department of the institution. Many of the operations performed were on patients received from these sources, therefore the proportion of operations to the given number of uterine cases under treatment is larger than, in reality, could we arrive at the total number under observation, yet it is sufficiently small to show that this operation has never been with me the rule of treatment."

The house-surgeon omitted from his return a death which followed a division of the cervix by me, and took place

several weeks after she had passed from my charge in May, 1872. It was, I believe, about three weeks after the operation, when out for the first time, that, after a long ride, she was attacked with peritonitis, and died. It has been but recently that I accidentally learned of her death.

The treatment of flexures of the cervix may be narrowed down to the use of surgical means, if the flexure is well marked, since we have no better agent for rectifying the condition. We must however be certain that no tendency to cellulitis exists, and that the patient is in a proper condition for the operation. The operation at the beginning is good practice for this class of flexures, when feasible, with local treatment to the canal afterwards if needed.

For flexures of the body, the rule of practice is to be reversed, since no operation can be of the slightest benefit, so long as the condition exists which caused the flexure. An operation will generally prove a detriment to the patient's condition afterwards, if not needed, and is frequently the indirect cause of death, as we all know.

Cases are sometimes met with where it is difficult to decide as to the exact seat or form of flexure, and also as to the tendency to cellulitis; but in all cases of doubt it is the proper practice to institute the most careful local treatment before attempting any operation.

In the local treatment of flexures of the body, we must be governed by the same general principles as are applicable to any other form of uterine disease. The chief reliance for giving tone to the pelvic vessels and for removing the chronic state of venous saturation, as it were, lies in the proper use of the hot water vaginal injections, at a temperature of from 100 to 110° in accordance with the urgency of the case.

Flexures are by no means so common as they are generally supposed to be; and of the cervix, to an extent requiring an operation, so rare that I do not see, on an average, one case in a month. I have no doubt the relative proportion of flexures to other conditions would be even less than I have stated, since I have noticed that they were more

frequently met with by me ten years ago, than at a more recent period; this is particularly true in reference to retroflexions. Growths, or thickening on the uterine wall, will sometimes mislead even an expert in trusting to the aid of Sim's copper sound, as valuable an instrument as it is, since the organ will yield sufficiently to the preconceived curve given it; and Simpson's sound is worthless for the purpose. The light and delicate silver uterine probe, first used by me some fourteen years ago, has proved, in my hand at least, the most valuable instrument for diagnosis in these cases. If handled with the same care and tact as a surgeon would follow the course of a gun-shot wound, it cannot mislead, or do damage to the patient by exciting the inflammation, which sometimes follows the use of a less yielding instrument.

I never divide the neck of the uterus laterally except for the treatment of fibroids or for opening a partial closure of the os, and in the latter case do not extend the incision beyond the crown of the cervix. In this simple operation, as well as when dividing the cervix backward, I round off the divided edges so as to leave somewhat of an excavated surface. The object is that, with the healing and any contraction afterwards, the mucous surface on the neck will be rolled in so as to leave the os more patulous and of a more natural shape. A female often continues sterile after an operation, even with the canal sufficiently enlarged, should the two edges lie in a close line of contact on the vaginal surface. It is of course as necessary to keep the divided surfaces apart until healed and in the usual manner by pledgets of cotton saturated with glycerine.

I have not been able to satisfy myself that a constriction of the uterine canal above the external os ever occurs, if the organ be not flexed, except from growths or after a strong caustic agent has been passed to the fundus. I think the operation as practised by Simpson, or any modification of it, uncalled for and detrimental. We sometimes have a thickening or an edematous condition of the mucous membrane, or, from cystic degeneration, an encroachment on the calibre

of the canal, but in all the conditions of this character the knife is unnecessary and careful dilatation answers every purpose.

After thus stating my own views and experience to so great a length, with but the single purpose in view, I trust that I may be instrumental in drawing out the opinions of others on this subject for our common benefit.