ORIGINAL ARTICLES.

THE INTRA-UTERINE STEM IN THE TREATMENT OF FLEXIONS.¹

BY A. REEVES JACKSON, A.M., M.D.,

PROFESSOR OF GYNECOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO, ETC.

As medical practitioners we all come, sooner or later, to attach more importance to the results of our individual experiences in practical matters than we do to those of others; that is to say, as we exercise more and more our powers of observation we are likely to feel a constantly increasing degree of confidence in their accuracy. This may not seem modest or wise, and may even be an obstacle in the way of progress in the acquisition of knowledge. But these considerations are not to the point, and I shall not discuss them. I only desire to announce the fact. And, knowing this, I shall not expect that the facts which I have to offer for consideration, or the arguments based upon them, will have so much influence upon others as they have upon myself.

I began to treat uterine flexions with the stem pessary in the year 1870. Prior to that time the only methods I had employed were gradual dilatation and incisions. The results obtained were not satisfactory. Some of the cases treated by dilatation were benefited for a time, but those which were of long standing, and presumably accompanied by much textural alteration, almost invariably relapsed, unless pregnancy subsequently occurred. In two of the cases in which I incised the cervix the operation was followed by pelvic inflammation, and in one of them the woman barely escaped with her life. I felt the need of, and sought for a safer and more successful method. I had received the impression that the treatment by intra-uterine stems was more hazardous than either of the others, and although I could not understand why this should be so, I accepted the teaching, and commenced their use with great misgiving. At first I did not rely upon the stem wholly, but preceded its use with moderate dilatation, or with incision. In two of the cases in which this mixed method was employed pelvic cellulitis resulted—one of them terminating in abscess. In not a single instance in which the stem alone has been used has recognizable inflammation occurred, although it has seemed imminent in two or three.

Within the past few years observations have been published (Vedeler, Herman,) showing that ante-flexion of the uterus is a frequent and normal condition; that it bears no causative relation to the symptoms usually ascribed to it; and that, hence, flexions, as such, do not demand treatment at all.

While it may be admitted that all cases of uterine flexion are not accompanied by dysmenorrhœa or sterility, and that both these conditions are frequently attributable to other causes even when co-existent with flexion, yet it is equally true that in very many instances there does exist a relationship of cause and effect between the flexion and the symptoms named.

In these, certainly, the flexion must be looked upon as a mischievous pathological factor, and one which ought to be corrected. And I know—so far as I can say I know anything—that very many of them are amenable to successful treatment.

I have never attempted to treat any case of uterine flexion which was not accompanied by dysmenorrhœa; and the removal of this symptom was the principal, and sometimes the only, object in view—although co-existing barrenness frequently constituted an additional incentive to the patient to undergo efforts at cure.

I have used several forms of stem pessary, but as most of them have been abandoned for various reasons, I need not consume time by mentioning them in detail. More than any other I have used, and still use, the Chambers bifurcated vulcanite instrument, and this has been the most satisfactory. A radical defect, however, of the instrument as commonly used is the divergence of the branches *below* the internal os uteri. This produces an undue degree of stretching of the parts, resulting sometimes in irritation and expulsive pains. I have frequently secured the retention of the instrument by approximating the branches, and using it as a single stem when it could not be borne with the branches separated. In all cases the stem ought to be practically single below the internal os. Above this point a slight bulging may be given to the blades near their tips, thus preserving the self-retaining feature of the instrument.

The details of the method which I employ latterly are as follows: After ascertaining the existence and direction of a flexion, I endeavor to pass a flexible olive-tipped bougie through the bent portion and, if possible, quite to the fundus. The depth of the uterine canal is carefully noted. I then select a pliable stem having the same diameter as that of the bougie, and one-third of an inch shorter than the ascertained depth of the uterus. The os uteri being then exposed by means of a speculum, the stem, either seized with dressing forceps or mounted upon the end of a piece of pointed wire, is passed entirely into the uterus. A large flattened tampon of absorbent cotton, moistened with slightly aluminized glycerine, is then pressed firmly against the bulb of the stem, and allowed to remain one or two days. It is then removed and replaced by a fresh one. It may be necessary to reapply the tampon three or four times before the tendency of the stem to slip out of place disappears.

If the os uteri be found pointing high up, either forwards or backwards, it may be impossible to introduce the pessary through a valvular speculum. In such a case the patient should be placed in the semi-prone position of Sims, or, as I prefer, in that of Simon, on the back, with the buttocks projecting beyond the edge of the table, or bed. With perineum retracted, the cervix may be drawn towards the vulva with hook-forceps, and the stem introduced as above described. These cases present rather more difficulty at this stage of the treatment, but, as a compensation, the stem very rarely leaves its place.

These flexible stems are made by cutting the distal end from the ordinary bougies used for stricture of

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the male urethra. A shoulder or bulb is provided by rolling upon the stem a section of rubber tubing.

After the yielding stem has remained for a period varying from one to three weeks, according to the degree of tolerance manifested by the uterus, it is removed, and a thicker one put in its place. This, likewise, is permitted to remain a week or two, and is then replaced by a Chambers stem, which, after the preliminary treatment described, rarely produces irritation. I never expect much, if any, change of shape to occur in the uterus in consequence of the use of the flexible stem; and yet in several instances I have been surprised to discover that a very considerable alteration had taken place within a few weeks, or even a few days, after beginning its use. Moreover, in a few cases I have not been obliged to resort to a rigid instrument at all, the acuteness of the flexion having been converted into a slight curvature by the use of the pliable instrument alone. Usually, however, not only have I found it necessary to use an inflexible, or nearly inflexible, pessary, but to persevere in its use for periods varying from three months to a year. This is not done continuously, however. I always remove the pessary at the end of three or four months. Of course, the uterus is found straight at this time. The patient is permitted to go without the stem for at least a week, at the end of which time I make an examination to ascertain the condition of the uterus. If it be found still of proper shape the pessary is not re-introduced. I do not feel at all certain, however, that the apparent cure after so brief a period will be permanent, and, if practicable, I like to make another examination after the further lapse of two or three weeks. In case the examination reveal a return of the distortion, even in slight degree, the stem is replaced and the patient directed to wear it for another period of two or three months, when the effect of the treatment is again tested.

The feature of this treatment which I hold to be necessary to its safety and success, is its slow and gradual conduct; and the non-observance of this necessity has been, I believe, the cause of dangerous results and a failure to cure. A moment's consideration ought to assure us that an amount of force necessary to suddenly straighten a chronically flexed uterus would be as great as would be needed to bend a straight one, and could not be safely applied to the exterior of the organ, were that possible, much less to its delicately organized interior. Any method of treatment which contemplates the very rapid restoration of a flexed uterus, is faulty in principle and dangerous in practice. The distorted viscus must be coaxed, as it were, into proper shape, and then permitted to grow into normal symmetry.

The drawbacks to this method of treating uterine flexions are fourfold: 1. Difficulty of retaining the instrument in position. 2. Pain. 3. Hæmorrhage. 4. Pelvic inflammation. The three latter are common to all other modes of treatment.

1. *Difficulty of Retention.*—In nearly all cases there is a tendency on the part of the uterus to expel the foreign body, and this tendency is in direct proportion to the degree of irritation produced by its

pressure—modified, however, by the relative sensitiveness or excitability of the uterus. In some cases an intra-uterine stem will give rise to most intense expulsive efforts at riddance, while in others its presence will be apparently unheeded; but even in some of the worst of these tolerance becomes established after a few days of rest in bed, and use of the tampon.

Occasionally, even when the uterus appears quite tolerant of the presence of its tenant, the latter will slip out almost as quickly as it is introduced. I have not found any entirely satisfactory method of preventing this. The best, so far, has been the use of a vaginal pessary which maintains the uterus in a position of a strong ante- or retroversion, and thus brings the bulb of the stem to rest against the vaginal wall.

2. *Pain.*—In my experience, pain in any considerable degree has not been a frequent or formidable symptom. When it is manifested I rarely do anything to lessen it beyond enjoining strict rest in bed. Regarding it as an indicator of the amount of local disturbance the stem may be causing, I prefer to not abolish it by the use of opiates, and thus mask possible inflammatory mischief. Commonly, pain which early follows the insertion of the stem subsides after a day or two. If it persists longer, or becomes worse, I at once remove the instrument for a few days and then re-introduce it. It may sometimes be necessary to thus remove and replace it several times before it can be finally left.

3. *Hæmorrhage.*—This is a frequent consequence of the use of the stem. I have known a few cases in which it was produced almost immediately after the introduction of the instrument and continued as long as the latter remained. In most instances, however, we need not expect more than a slight flow, lasting a few days, and perhaps an earlier appearance of the next menstrual epoch, with, possibly, an increased amount of discharge during the first two or three periods following the beginning of the treatment.

4. *Pelvic Inflammation.*—As already stated, this has not occurred in my experience as a result of the use of the stem pessary. But the fact has not lulled me into an unwarranted security against its liability to appear, and I find myself always looking for it.

The following table comprises the details of sixty-four cases of flexion of the uterus treated with the intra-uterine stem, and shows the ages and social condition of the patients, the number of children borne by them, the direction of the flexion, and the result of the treatment, so far as known:

TABLE OF SIXTY-FOUR CASES OF FLEXION OF THE UTERUS TREATED BY THE INTRA-UTERINE STEM.

Age.	Social Condition.	Direction of Flexion.	Children.	Result.	Remarks.
1 39	Married	Retroflexion	6	Unknown	
2 27	"	Anteflexion	...	"	
3 29	"	Retroflexion	3	"	
4 30	"	Anteflexion	...	Cure	Pregnancy followed; child at term.
5 25	"	"	...	"	Became pregnant while wearing Chambers's stem; child born at term.
6 20	"	Retroflexion	...	"	
7 20	"	Anteflexion	1	"	
8 21	Single	"	...	"	Subsequently married and bore two children.

No.	Age.	Social Condition.	Direction of Flexion.	Children.	Result.	Remarks.
9	28	Married	Retroflexion	...	Unknown	
10	19	Single	"	...	"	
11	23	Married	"	...	"	
12	28	"	"	...	Cure	
13	30	"	Retroflexion	...	"	Pregnancy followed twice; children born at term.
14	21	Single	Anteflexion	...	"	
15	19	"	"	...	"	
16	25	Married	"	1	"	
17	29	Single	"	...	Unknown	
18	24	Married	"	...	Cure	
19	27	"	"	...	"	
20	28	"	"	...	"	
21	25	"	"	...	"	Chambers's pessary retained continuously 20 months without discomfort.
22	26	"	"	...	Unknown	
23	32	"	"	...	"	
24	24	Single	"	...	Cure	
25	28	Married	Retroflexion	...	"	
26	32	Single	Anteflexion	...	Improved	
27	21	"	"	...	Cure	
28	27	"	"	...	Improved	
29	"	"	Retroflexion	...	Cure	
30	19	"	Anteflexion	...	"	Subsequently married and bore children.
31	20	Married	"	...	Unknown	
32	31	"	"	...	Cure	
33	24	"	Retroflexion	1	Improved	
34	32	"	Anteflexion	...	Unknown	
35	19	"	"	...	"	
36	22	"	"	...	Improved	
37	20	"	"	...	Unknown	
38	26	"	"	...	Cure	Afterwards married and bore one child.
39	28	"	"	...	"	
40	21	Single	"	...	"	
41	36	Married	"	...	"	
42	30	"	"	...	"	Became pregnant in one month after stem was removed.
43	27	"	Retroflexion	2	Unknown	
44	26	Single	Anteflexion	...	Cure	
45	35	"	Retroflexion	...	"	
46	22	"	Anteflexion	...	Unknown	
47	20	"	"	...	Cure	
48	24	Married	"	...	"	Had two children subsequently
49	31	"	"	...	"	
50	37	Single	"	...	"	
51	25	"	"	...	"	
52	21	Married	Retroflexion	1	Unknown	
53	28	Single	Anteflexion	...	"	
54	27	Married	Retroflexion	...	Cure	
55	23	"	Anteflexion	...	"	Married subsequently and became pregnant.
56	33	"	"	...	Unknown	
57	36	"	Retroflexion	1	Cure	
58	23	Single	Anteflexion	...	Unknown	
59	30	Married	"	...	Cure	
60	34	"	"	...	Unknown	
61	20	Single	"	...	Cure	
62	28	Married	Retroflexion	...	"	
63	24	"	Anteflexion	...	"	
64	20	Single	"	...	"	

From the foregoing table it will be observed that of the sixty-four cases, forty-two occurred in married and twenty-two in single women. Of the former, eight had borne children; the other thirty-four were sterile. Of the latter eight subsequently were fruitful. Of the entire number a cure of the flexion followed in forty; four were improved and relieved of dysmenorrhœa, which before had been constant. In twenty the result was unknown. The ages of the patients ranged from 19 to 39 years. The uterus was anteflexed in fifty, and retroflexed in fourteen.

I believe the principle of the intra-uterine stem in the treatment of flexions to be correct; and it need not be dangerous—at least no more dangerous than any other effective method. I further believe that by its use a larger number of cases of uterine flexion can be cured than by any other means at present in vogue. The conditions necessary for safety and success are watchfulness, patience, and slow progress.

MEDICAL PROGRESS.

PHYSIOLOGICAL EFFECTS OF MASSAGE.—DR. F. GOPADZE has published a series of observations undertaken with a view to determine the effect of massage on the transformation of the nitrogenous principles of food. He has investigated the history of the subject; and finds traces of it in a Chinese work 3000 B.C. Dr Gopadze finds that though there has been a general tendency amongst authors to assume that massage increases the assimilative power, no exact observations on the subject have hitherto been published. He therefore obtained the co-operation of four medical students, who for three consecutive weeks became inmates of Professor Manassein's clinic, and lived on certain articles of food—bread, milk, soup, veal, and roast beef, the quantities ingested being accurately noted. The nitrogen in all the samples of food, and in the feces and urine excreted, was determined by the Kjeldahl-Borodin process. Massage was practised for from twenty to twenty-five minutes once a day two or three hours after food. The operations were commenced by *effleurage*, beginning from the extremities and working towards the centre. This was followed by *massage à friction*, *pétrissage*, *tapotement*, a second *effleurage* of each part concluding the whole. The temperature was subsequently taken, and in some cases sphygmographic tracings. In all four cases the appetite was decidedly increased, not only during the week in which massage had been practised, but after it had been stopped; thus, one of the subjects took an average daily quantity of 24.95 grammes of nitrogen during the first week, 30.97 during the second or week of massage, and 29.57 during the third week. Similarly the amount of nitrogenous transformation was augmented during the continuance of massage in all four cases. The augmentation persisted in two of the cases, but in the other two the transformation was less during the third than during the first week. In case 1 the nitrogenous transformation was increased 3 per cent. during the second week and 1 per cent. during the third. In case 2 it was increased 1 per cent. during the second week, but diminished 11 per cent. during the third. In case 3 it was increased 3 per cent. during the second week, but diminished 10 per cent. during the third. In case 4 it was increased 4 per cent. in the second week, and 3 per cent. in the third. The quantity of nitrogen assimilated increased in all four cases, independently of the amount of food ingested. During massage two of the subjects gained slightly in weight, the other two losing weight; but during the week following the one in which massage was practised all four gained. The axillary temperature decreased for about half an hour after the operation to an extent varying from 0.1° to 0.5° C., after which it began to rise, attaining its original figure, or from 0.1° to 0.3° below it, about an hour after the end of the *seance*. The respirations became more frequent, and were of a deeper character. The effect on the pulse varied with the character of the massage. When this was carried on lightly, the pulse became more frequent; but when the manipulation