A CASE OF CHRONIC SENILE INVERSION OF THE UTERUS FOLLOWING THE DEVELOPMENT AND REMOVAL OF A FIBRO-MYOMA: AMPUTATION: RECOVERY.*

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SEEING that the subject of inversion of the uterus was to come before the Obstetric Section, and feeling that the collation of clinical illustrations affords the most useful means for a right understanding of pathological and therapeutical problems, I have been induced to submit the following case.

Two or three preliminary observations I may be pardoned for obtruding. In discussing inversion of the uterus, especially with reference to treatment, it is essential to bear in mind the distinction I have laid down elsewhere between recent and chronic inversion. An inversion may be described as recent, so long as the due involution of the uterus following labour is not completed. This process takes about a month. During its progress, the uterine muscular fibre still retains more or less of the contractility, dilatibility, and vascularity of the pregnant organ. When the process is complete, the muscular wall of the uterus has lost much of the contractility, dilatibility, and vascularity which are developed under pregnancy. Those methods of reduction which are comparatively easy if tried within a month after labour may fail if tried at a later period.

In the case I am about to relate, the inversion was first noticed ten years after the woman's last labour. It was discovered after the removal of a fibro-myoma; and the inversion was probably—not certainly—-independent of the process of labour. Beginning with the classical case of John Hunter, the preparation of which is in the Hunterian Museum, I have collected in my *Obstetric Operations and Diseases of Women* several cases of inversion caused by fibroid tumours. I now describe an interesting case of this kind. Although, in these cases, the growth of a tumour in the uterus may induce muscular development in the proper uterine walls analogous to that observed in pregnancy, still the condition of the uterus, as it comes under observation, much more closely resembles that of chronic inversion. We may, therefore, class the case I now describe as one of chronic inversion. We might, perhaps, even with stricter propriety, refer it to a third order of cases; namely, to one which includes chronic cases observed in women who have reached or passed the climacteric. In these cases, the uterus has gone beyond the involution which follows pregnancy. It has been still further affected by the involution of senility or decrepitude. These, then, may be classed as "senile chronic inversion". The uterine tissue is more dense; the muscular element is disappearing, the fibrous predominating. Hence reduction by taxis or the various manœuvres found effective in the recent and ordinary chronic inversions is more difficult. My present case falls under this order. The woman was near fifty, and senile changes had set in.

In November 1877, I saw, at some distance from London, a woman aged 47, who had had her last child ten years before. Since that time, she had suffered much from metrorrhagia, and this had lately much increased in severity. Being active in business—she was the wife of an innkeeper—she went on disregarding her condition until the losses told so much upon her that she was compelled to give in. She was very stout. I found a large firm mass, rounded, filling the pelvis like a child's head. The hand passed in with some difficulty, surrounded the tumour, and traced its attachment by a broad pedicle to the uterine cavity. I adjusted a wire and cut it through by *écraseur*. A little bleeding followed. The tumour was so large that it was with difficulty brought through the vulva which had previously admitted my hand. It was a fibro-myoma of the size of a small foetal head. She made a good recovery, and resumed active work.

In May 1879, I was summoned to her again. She had again been suffering from menorrhagia, alternating with offensive watery discharges stained with blood. She was very blanched and very prostrate, and had increased in stoutness. I found a pyriform tumour of the size of a Jargonelle pear, with a small pedicle in the vagina; the root quite continuous with the vaginal roof, leaving no passage beyond for the sound. Her condition made it imperative to remove it with the least possible delay. I applied a wire as before, thinking it was a polypus; but, on tightening the wire, the acute pain aroused the suspicion that it was the inverted uterus. This was verified by closer examination. Still we

determined to persevere with ablation, knowing that her condition was too low to bear the tedious, painful, and probably forcible process of reduction by sustained elastic pressure. I therefore deliberately cut through the pedicle with the wire. Rather free bleeding followed; this was staunched by swabbing with tincture of iodine. Considerable pain in the abdomen followed; this was allayed by opiates, and she slowly recovered. My friend Mr. Turrell reported on July 6th that she had progressed favourably—had walked for more than half an hour the day before; and that, examined by the speculum a week before, the cicatrix appeared complete, and all constitutional disturbance had subsided. The temperature rose during the first week to 100.5° and 102°; the pulse to 104, and then fell to normal rate.

The specimen is in the Museum of St. George's Hospital. It is laid open to show the interior. The extremities of the Fallopian tubes and of the round ligaments are drawn into the inverted cavity.

The question arises, When was the inversion produced? It might have arisen before the removal of the tumour in the first operation, or during that operation, or at some subsequent time. Which is the more probable? It is difficult to understand how the uterus could turn itself inside out after the tumour was removed. But it is not impossible that the stump left behind might be so large and projecting as to excite uterine expulsive action, and that thus the inversion was completed soon after the first operation; the stump meanwhile undergoing disintegration and disappearing. But I am more inclined to conclude that the inversion was produced or completed during the operation or immediately after it. I had no opportunity of examining again; and, indeed, she got on so well that there seemed no indication for further treatment, until a year later.

Another question arises: one which I put to myself with especial point, because I acted in opposition to rules upon which I have much insisted. Might not reduction have been effected and amputation avoided? Might not the resistance have yielded to sustained pressure, aided by taxis and the operation I have recommended and practised with success, of incising the neck of the uterus? It is impossible to answer this question in the negative. The attempt, I knew, would be attended by unusual difficulty, suffering, and danger; and, since the subject had reached the climacteric, the loss of organs which had already passed into decline could hardly be regarded in so serious a light as the loss of organs still in the plenitude of functional life. In these cases, then, of senile chronic inversion, the methods of ablation come into stronger competition with the methods of reduction than they ought to be permitted to do in cases of simple chronic inversion. Still I think that even in cases of senile chronic inversion, where the conditions are favourable to the attempt at reduction, the attempt ought to be made. I venture to conclude with the following propositions.

The division of uterine inversions into three orders—namely, 1, recent; 2, simple chronic; 3, senile chronic—it will be seen, is based upon clear physiological distinctions; and this division carries clear therapeutical indications. In the recent cases, immediate reduction by taxis is almost always indicated. In the simple chronic case, taxis, aided or not by sustained elastic pressure and incisions of the uterine neck, is indicated, and will almost always be feasible. In the senile chronic cases, reduction by taxis, aided by every ancillary means, though still indicated, will be much more difficult of execution; and amputation, the last resource, will be less open to physiological objection, and at the same time less dangerous, than in the first two orders of cases. It must finally be borne in mind that, especially in the senile chronic inversions, tolerance may be acquired, and thus render all operative interference unnecessary.

THE TREATMENT OF CHRONIC COMPLETE INVERSION OF THE UTERUS:

WITH CASES ILLUSTRATING THE ADVANTAGES OF THE DIRECT METHOD OF APPLYING ELASTIC PRESSURE.*

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THE time has at length arrived when the treatment of inversion of the uterus can no longer be looked upon as an opprobrium to gynæcology. Now, it must be a very exceptional case which cannot be cured, or which demands for its relief dangerous or mutilating operations.

It will be convenient to consider the present subject under the heads Reposition, Aids to Reposition, and Repositors.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

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1. REPOSITION.—During the reposition of an inverted uterus, it may be made to pass through three distinct movements, the results of three methods of reposition—fundal, lateral, and cervical.

Fundal Reposition is impossible except in cases of acute inversion, when the walls of the uterus are very much relaxed. It is attempted by pressing upon the fundus with the fingers in the form of a cone, or with a drumstick-shaped instrument. The object is to drive the fundus through the cervix. It is the most unscientific method of replacing an inverted uterus, as it demands unnecessary dilatation of its neck. Fundal reposition ought never to be employed; it has been superseded by

Lateral Reposition.—This is a very effective plan of reducing acute inversion. The secret of its success has been well explained by Dr. Marion Sims. "By this means," he says, "we slide one-half of the organ at a time through the os internum, instead of the whole fundus, which presents a greater diameter." The manoeuvre is performed by the hand, pressure being exerted against either horn of the uterus. Some years since, I was requested to remove what had been diagnosed as a polypus, but which turned out to be an uterus inverted after the patient's confinement ten days previously. In this case, I first tried the fundal plan, but without success. The lateral method succeeded in reinverting the organ in two or three minutes.

Cervical Reposition.—It is difficult to say to whom the credit of having first recommended this plan of reposition is due. In this country, Newnham drew attention to it as early as 1818. He says: "It is wisest and best to endeavour to reinvert the uterus by returning first that portion of it which was last expelled from the os uteri" (*Essay on Inversio Uteri*, p. 16). The recognition of this fact was an immense step in advance, and upon it depended the success now reached. Cervical reposition is produced by pressure upon the fundus; but all idea of indenting it is discarded.

Rate of Reposition.—Whether we look upon the uterus as a plastic organ to be moulded, or a muscle to be tired out, it must be equally unscientific to endeavour to force it to change its form suddenly. When it has been inverted two or three months and the process of involution has been completed, rapid reinversion, whether it be attempted by hand or by the reposer, is an operation unnecessary and unjustifiable. There is no need for such dangerous haste. It will probably be found that even gradual pressure had better be exercised intermittently rather than persistently; for the continuous forcible urging of the cup of the reposer against the fundus may result in sloughing.

2. AIDS TO REPOSITION.—Many adjuvants to reposition have from time to time been suggested and employed. *Posture, hot-water injections, belladonna, and galvanism* have been recommended. *Compression* of the uterus by hand, forceps, or bandage, has been also used; but it can be of no use in chronic inversion. It belongs to the past period of fundal reposition, and is not free from danger, as in some cases it has caused sloughing. *Dilatation* of the cervix is another mode of aiding reposition. It may be effected by the fingers acting through the vagina, the rectum, or the abdominal walls. It has also been performed by opening the abdomen and passing a dilating instrument directly into the cervix. *Incisions* have been recommended for the purpose of overcoming the rigidity of the cervix; but they have not been found to answer in all cases; and, where they have, lacerations have also occurred, extending the lesions caused by the knife. *Sutures* have also been passed through the neck of the uterus to maintain the ground gained when reposition has been half performed. Fortunately, it may now be stated that all these aids to reposition, whether they be harmless or dangerous, will henceforth be unnecessary.

3. REPOSITORS.—Various instruments have been used from time to time for the purpose of replacing inverted uteri. Of these, the most important are the hand, elastic bags, straight rods with round and cupped ends, curved rods with round and cupped ends, and double curved rods with cupped ends.

The Hand has been much used as a reposer in chronic inversion; but, it must be confessed, more often with the result of lacerating the vagina than reinverting the uterus. It is an admirable instrument in acute inversion, when lateral reposition is so desirable; but in chronic cases it is cruel and inefficient. Time is now required. No hand can sustain the fatigue of taxis for a sufficiently long period. It is most unscientific to demand suddenly from the uterus that which it will willingly grant if reasonable time be only afforded. The hand, therefore, must be discarded as a reposer in chronic inversion.

Elastic Bags have many faults. They act too slowly; they compress parts which need no pressure; they slip out of the vagina, obstruct the action of the bladder and rectum, and lack precision in exerting their

power. It was upon the elastic bag, however, that we took the first great step towards perfecting the application of gradual elastic pressure in the cure of chronic inversion; and to our countryman Dr. Tyler Smith undoubtedly belongs the credit of having done this service. Elastic bags have cured many cases of inversion; but their day has passed.

Straight Rods with Rounded Ends, like drumsticks, were the first instruments employed. They were used for indenting the fundus, and thus reinverting the uterus by fundal reposition. No one dreams of using such a reposer now.

Straight Rods with Cupped Ends.—Perhaps the first cupped reposer mentioned is that referred to by Madame Boivin. In Hemming's translation, page 126, we find the following remarkably suggestive passage. "Might not pressure from below upwards be also made available? A pessary, like that of a cup and ball, might, for this purpose, be introduced into the vagina." The change from the convex to the concave extremity of reprositors was a great advance, and, in fact, became inevitable as soon as operators abandoned the fundal and adopted the cervical method of reposition. The straight cupped reposer is nearly a perfect instrument; but it lacks the power of applying pressure to the fundus in the most direct and efficacious manner. It must always act laterally, causing the cup either to slip past the fundus or to urge it against the posterior wall of the vagina in a line diverging 25° from the axis of the pelvic inlet.

CASE I.—A successful case treated with a straight cupped reposer by Dr. Matthews Duncan (*St. Bartholomew's Hospital Reports*, vol. iv, p. 97) will illustrate its advantages and disadvantages. The main facts are briefly as follows. Mrs. S. A. C., aged 38, was admitted into St. Bartholomew's Hospital on March 13th, 1878, with chronic inversion of the uterus, caused by a fibroid. This was removed, and the treatment for reinversion commenced on March 16th by "persistent and very powerful reducing taxis", employed by Drs. Duncan, Godson, and Champneys, but in vain. On May 21st, a straight cupped reposer was applied, and elastic pressure maintained for seventeen hours. Pain, vomiting, and distress rendered it necessary to remove the instrument. On May 28th, a second attempt at reduction was made, but "failed from the cup slipping off the fundus uteri". On June 4th, the reposer was again used, and in seventy-four hours reposition took place.

Curved Rods with Round Heads.—Chailly Honoré mentions the use of a "bâton courbe renflé à son extrémité" in cases of inversion, and White's first reposer was of this form. Round-headed rods with a pelvic curve are not now used.

Curved Rods with Cupped Ends.—These are not such perfect instruments as straight cupped rods; but they are still much in favour with some gynaecologists. They exert pressure in a wrong direction; that is to say, in a line diverging as much as 45° from the axis of the pelvic inlet. Consequently, all the disadvantages of a straight cupped reposer are increased.

CASE II.—A case treated by the curved cupped reposer, under the care of Dr. Robert Barnes (*Obstetrical Journal*, vol. i, p. 5), may be given in illustration. It is briefly as follows. H. H., aged 27, was admitted into St. Thomas's Hospital February 19th, 1872, suffering from chronic inversion of the uterus.—February 20th. Supposing the uterus to be a polypus, the *écraseur* was applied; but, pain being complained of, it was removed.—March 6th. Inversion having been diagnosed, the "largest hydrostatic dilator" was applied in the vagina and used for two days.—March 13th. A curved reposer was inserted and retained until the 19th, when pain, vomiting, and rigors came on, and the instrument was removed.—March 22nd. The patient was placed under chloroform, and two incisions were made in the cervix uteri, and reduction by taxis attempted. Failing, the reposer was again employed, and continued in use until April 9th, having been temporarily removed on the 5th and 6th, while further attempts were made by taxis. On the 9th, the patient was greatly troubled with vomiting and prostration, and it was determined to make another attempt at reduction by taxis. This was the fifth attempt to reinvert the uterus by hand, and it succeeded.

Double Curved Rod with Cupped End.—It will have been noticed that neither the straight nor the single curved reposer exerts pressure in the most advantageous direction. The necessity of doing this has been long recognised. Burns, in 1728, says reposition "may be facilitated by pressing up the fundus in the direction of the axis of the uterus"; and Aitkin, in 1784, remarks that reinversion may be best "effected by pressure in a just direction". Gooch, in 1831, gives us the most explicit instructions. He says: "You are to press it (the uterus) against the os tincæ, not upwards and backwards, but in the

direction of the upper axis of the pelvis, upwards and forwards towards the præcordia." Nothing more of a practical nature relating to the line in which force should be used can be added to these words. In inventing my repositor, I have endeavoured to construct it in such a form as to make it possible to carry out Gooch's instructions. The rod which supports the cup has been doubly bent, and has a pelvic and a perineal curve. With this instrument, the fundus of the inverted uterus may be pressed "*upwards and forwards*" in a direct line with the axis of the uterus and the pelvic inlet. Dr. Matthews Duncan, when detailing his case, has referred to my instrument. He says: "It has been thought advisable by Aveling to give the stem of the repositor a perineal curve, such as is observed in Tarnier's midwifery-forceps, and for reasons analogous, if not identical. But such modification of the simple straight repositor seems to me unnecessary." I take this opportunity of explaining that the curve in Tarnier's forceps, from which I am supposed to have derived my idea, was invented by myself and applied to my forceps and published ten years before Tarnier made his forceps known. When I published the first notice of my repositor, I said the straight repositor must have a tendency to slip past the fundus; and in the next paragraph to this, in which Dr. Matthews Duncan expresses his satisfaction with the straight instrument, he records the occurrence of the very accident I predicted.

My repositor has been used three times during the past year—twice by myself and once by Dr. John Williams. The cases are briefly as follows.

CASE III.—Mrs. W. came under my care suffering from chronic inversion of the uterus. She had been treated by several eminent gynecologists with a variety of repositors and by taxis, and had been sent to Mr. Spencer Wells to have the uterus removed. The patient, however, thought she would have one more attempt at being cured without mutilation, and fell into my hands. It was for this case my repositor was made, and it was applied without causing much pain on May 7th, 1878, at 3 P.M. The cup was fitted to the fundus, and by means of four elastic rings, two in front and two behind—all being fastened to a belt kept up by braces—pressure was exerted in a line with the axis of the pelvic inlet to an extent never exceeding two and a half pounds.—May 8th, 10 A.M. The uterus was found reinverted as far as the internal os. At 9.30 P.M., in consequence of pain, all pressure was removed for thirteen hours.—May 9th, 10.30 A.M. The repositor was again made active.—May 10th, 10.35 A.M. The uterus was found completely reinverted. (*Transactions of the Obstetrical Society of London*, vol. xx.) This most obstinate case, therefore, was cured in sixty-seven hours and a half, or in fifty-four and a half hours of active treatment. The patient had no constitutional disturbance, and spent the day after in writing and knitting.

CASE IV.—Mrs. H., aged 26, was admitted into University College Hospital on August 30th, 1878, with chronic inversion of the uterus, under the care of Dr. John Williams.—September 3rd. My repositor was applied.—September 4th, 10 A.M. The uterus was found partly reinverted. At 11 P.M., the uterus was found completely reinverted. An offensive discharge continued for some days; but the patient was soon discharged cured. Reposition in this case was effected in thirty-three hours.

CASE V (not before published).—Mrs. L., aged 26, was admitted into the Chelsea Hospital for Women, under my care, on June 4th, 1879. She had chronic complete inversion of the uterus. Previously to her admission, attempts at reduction by taxis had been made.—June 5th, 4.30 P.M. I applied my repositor.—June 6th, 3.15 P.M. The uterus was found partly reinverted.—June 7th, 1 A.M. The patient felt the elastic rings "suddenly go loose", and all pain ceased. Dr. Chambers, paying an early visit to the hospital, found that the cup had passed into the uterus. At 4 P.M., the cup was tilted and easily removed. I passed my finger into the uterus to the fundus. The cavity measured three inches and three-quarters. An offensive discharge continued for some days; but the patient left the hospital for the seaside on June 25th, three weeks from the date of her admission.

An analysis of these cases shows the following results.

Dr. Barnes's *single-curved repositor* was actively employed five hundred and twenty-eight hours without success; and the treatment, from the first application of the instrument to its removal, was eight hundred and forty hours.

Dr. Duncan's *straight repositor* was in active use more than ninety-one hours; and the treatment, from the first application to the time of reinversion, was four hundred and thirty-two hours.

Dr. Aveling's *double-curved repositor* (taking an average of three cases) reinverted the uterus in forty hours, and the treatment lasted forty-four hours.

These figures show, I think, incontestably that, in treating chronic

complete inversion of the uterus, the direct method is the best; and that the success of a repositor is in exact proportion with the directness of its action.

INVERSIO UTERI.*

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THE two following cases are remarkable in this respect, that in the one symptoms of an alarming nature showed themselves, while in the other little or no inconvenience was experienced.

CASE I.—Mrs. A., aged 25, primipara, of good health previous to pregnancy, married, and was taken in labour at full term. She had been depressed and debilitated by news of the loss of her husband at sea. She had a tedious labour, and was delivered by her medical attendant with forceps; ergot having been previously given on several occasions. She made a slow recovery. The urine had to be extracted. She noticed that the after-discharges were profuse; and three weeks after delivery a profuse vaginal hæmorrhage set in which did not yield to astringents. Dysuria and dribbling were constant. The bowels were constipated. She gradually lost strength, became hysterical and delirious, and was at length seized with epileptiform convulsions. It was thus (October 20th, 1872), twelve weeks after the confinement, I was asked to see her in consultation.

She was lying in dorsal decubitus, drowsy, with low muttering delirium; pulse 120 to 135, weak; skin hot and dry; pallor of face. The teeth were covered with sordes; the tongue was furred, covered with aphthous spots, which extended over the tonsils and pharynx, and interfered with deglutition. The abdomen was flaccid, not tympanitic. She had occasional vaginal hæmorrhage.

On examination, I found in the vagina a pyriform tumour like a polypus. There was no uterine cavity; no uterus in the normal position, as determined by combined bladder and rectal examination, and by rectal and suprapubic examination, the patient being under chloroform.

Treatment.—I dilated the vagina with the hand, and applied the taxis after the combined methods of Viardel and Noeggerath, that is, fixing the uterus with one hand pressed against the ring of the cervix above the pubes, and grasping it *per vaginam* with the other, and bringing pressure to bear on one cornu. After forty minutes, it was reduced suddenly. On passing the sound, it measured two inches and a half. She was put under full doses of opium for two days. The bad symptoms disappeared, and she recovered.

CASE II.—Mrs. B., aged 46, married a second time, came under my observation for influenza and somewhat obscure abdominal symptoms, with the supposition of pregnancy. She objected to give me any history until after I had examined the case carefully and completely; the result of which was that I stated she had inversion of the uterus. She at once confessed it was so, and she knew it, and that this was the history. Twenty-eight years ago, when eighteen years old, she was confined with her first and only child, after a labour of three days' duration. She recovered so far as to be up and about in the course of three weeks, but the after-discharge continued more or less for twelve months. She had loss of power over the sphincter ani, dysuria, and dribbling of urine; and also partial loss of motor power over the lower limbs, especially after exertion. These conditions continued with varying severity for about ten years, after which they gradually abated and almost entirely disappeared. Menstruation became regular and normal, and continued so until about a year ago, when it ceased, and never returned. I advised her to let well alone. She continues well.

REMARKS.—The curious feature in the last case is this, that we find an intelligent lady who knew her condition resolute enough to marry a second time. It has medico-legal aspects, probably. But so well did she feel, that on the cessation of menstruation she imagined there was just a possibility of her being pregnant; and, under the *ruse* of a feigned illness, she attempted to get what she thought was an independent opinion. The first case, on the other hand, presented conditions of the most extreme danger. She was entirely unconscious, presented symptoms which indicated the grave nature of the so-called typhoid state, and had periodic convulsions of an epileptic character, each one of which threatened to extinguish her life. Reduction of the inversion was followed by an immediate abatement of all these grave indications, and she regained her health.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.