

INVERSION OF THE UTERUS

(Report of four cases)

by

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Inversion of the uterus is a condition that was recognised right from ancient times. Hippocrates (460 to 370 B.C.) has been given the credit to be the first to recognise it. With improved practice of obstetrics in modern days one hardly ever comes across cases of puerperal inversion and even chronic gynaecological inversion is rare.

The generally accepted figure for puerperal inversion is 1 in 30,000 labours whereas no such figure is available for the non-puerperal type. Incidence in India seems to be 1 in 8537 labours. In a large number of cases of puerperal uterine inversion reported by Das forty per cent were spontaneous, twenty one per cent followed traction on the cord and nineteen per cent were due to improper method of expressing the placenta. In Mac Cullagh's series (1925) the incidence of puerperal inversion was eighty five per cent and the incidence due to neoplasm was fifteen per cent. Thorn (1911) has found an incidence of thirteen per cent due to neoplasms, eighty seven per cent due to fibroids, five to six per cent due to carcinoma and nine per cent due to sarcoma. Clinical division of inversion is as follows:

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Acute Inversion—when it occurs at or just after labour. Chronic Inversion—when eight weeks have elapsed since inversion at labour took place. Tumour Inversion—when due to the drag of a tumour which is being extruded from the cavity of the uterus. Idiopathic Inversion—when it occurs spontaneously and is not due to labour or to a tumour. Curiously, the incidence of acute inversion is fifty per cent in primiparae and Jones (1913) has suggested the following mechanism. As the placenta is attached to the fundus of the uterus in these cases, the fundally attached placenta by its inversion of the inner circular wall of the uterus, and the associated uterine blood sinuses, destroys the tonicity of this layer of muscle so that contraction of the wall which radiated more strongly from the insertion of the round ligaments below the level of the fundus, flattens the dome and allows it and its attached placenta to be gripped by the lower unaffected circular fibres which then extrude it through the os. Anything like coughing, sneezing or bearing down will help the process.

In the cases reported here the patients were both second paras and we feel that apart from mismanagement of the third stage of labour some women have an inherent lack of tone in their muscles which predispose them to inversion. Tumour inversions are caused by distension and

weakening of the uterine walls together with expulsive contractions of the uterus and perhaps the weight of the tumour. Sometimes traction during removal of the tumour causes inversion.

Case 1: Acute Puerperal Inversion

A 20 years old patient was admitted with a history of having delivered at home, half an hour prior to admission. Delivery was conducted by a 'dai' and was normal. It was stated that the placenta came out of the vagina on its own. Dai thinking that the placenta had come out of the vulva tried to twist it but did not succeed in detaching the placenta and so the patient was brought to the hospital as she became unconscious soon after this catastrophe.

There was no history of an attempt being made to express the placenta and there was only slight bleeding in the third stage.

Obstetric history: One full term normal delivery which was also a home delivery three years ago. On examination, the patient was extremely pale and collapsed. Pulse was not palpable, blood pressure not recordable, respiration gasping in type, there was no oedema feet. Cardio-vascular system—heart sounds were present but slow. The abdomen was flat and soft. Uterine body could not be felt. Local examination showed the placenta lying outside the vulva with complete inversion of the uterus, placenta being still partially attached to the inverted fundus, no active bleeding was present. In spite of resuscitative measures the patient expired within fifteen minutes.

Post mortem vaginal examination showed complete inversion of the uterus. Anterior lip of the cervix was not felt, posteriorly a thin cervical rim was palpable. Histopathology report—No evidence of placenta accreta.

Case 2: Chronic Puerperal Inversion

A 25 years old patient was admitted on 28-4-67 for vaginal bleeding since five days. Patient delivered at home a year ago in a small town. The labour was normal. Placenta was expelled without any difficulty. Following delivery the patient was not able to pass urine on her own for 3 days. On the third postpartum day she had

severe pain in the lower abdomen and felt something descending down; after this she had profuse bleeding and fever, for which she was taken to the local hospital. In the hospital she was given a blood transfusion and had continuous high fever for 15 days which subsided after antibiotics.

She was treated in the hospital for a month and was advised an operation, but she refused. Three months after the delivery she started menstruating regularly and her general health gradually improved. She had no dyspareunia or bleeding during intercourse. Menarche was at the

4 to 5

age of 13 years. Menstrual history ———,

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Dymensorrhoea was present. L.M.P. 15 days ago. Obstetric history—1st full term normal delivery, child living. 2nd full term normal delivery child died after 15 days.

On examination, the patient was a well built, thin, anaemic woman, Pulse 100 per minute, BP 110/70. Cardiovascular and respiratory systems were normal.

On vaginal examination, the fundus of the uterus was not felt in the abdomen but a depression was felt. There was inversion of the uterus, a rim of cervix could be felt round the inverted uterus.

On speculum examination a red velvety mass was seen protruding from the cervix.

Investigations

R.B.C.—3,300,000 per cumm, Hb 45%
W.B.C.—6050 per cumm. Differential count, poly 69%, lympho 29%, mono 2%.
Urine and stool were normal. Blood sugar 102 mgm%. Blood Urea 21 mgm%. Bleeding and clotting time were within normal limits. Blood group A Rh D positive. Screening of the chest—Lung fields clear.

The patient's anaemia was treated by giving two blood transfusions and a course of intramuscular iron. When her general condition improved Haultain's operation together with ventral suspension of the uterus was done on 24-5-67 under spinal anaesthesia. It was noticed at operation that all the tissues and especially muscular tissue was lax and seemed to lack tone. The patient tolerated the procedure well and was discharged on 8-6-67. She started menstruating regularly after two months.

She was followed for two years but did not become pregnant; later she became a widow.

Comment: In this case probably the inversion of the uterus occurred on the third day after delivery. It is not known whether retention of urine was treated at home by massage or manipulation giving rise to inversion or whether the inversion was spontaneous as it was noticed that all her muscles, especially of the abdomen and uterus seemed to lack tone. At examination we did not see patent orifices of the fallopian tubes. There was definite sepsis according to the history. The uterine openings of the tubes were closed, and the patient came for treatment almost a year after the inversion occurred and so she was sterile.

Case 3: Chronic Inversion of the Uterus due to a Submucous Fibroid.

A 40 years old patient was admitted on 20-10-69 with a history of retention of urine since that morning and profuse vaginal bleeding since the previous day.

Menarche was at the age of 15 years.

Menstrual History: 7/30 flow was normal, no dysmenorrhoea.

Obstetric History: 2 full term normal deliveries, both alive. Last delivery 10 years ago.

On examination patient was a well built and well nourished woman of average intelligence. She was very anaemic. Pulse 80 per minute, BP 110/70. Cardiovascular and respiratory systems were normal. Abdomen was soft, liver and spleen were not palpable, urinary bladder was markedly distended and had to be catheterised.

On vaginal examination uterus seemed to be anterior and deviated to the right, a large polypoid mass was felt in the vagina but rim of the cervix was not felt around it.

Investigations: R.B.C.—3,400,000 per cumm, Hb 7 gms, blod KT—Negative, Blood urea—33 mgm%, Blood sugar—90 mgm%, Blood group—O Rh D positive, Screening of the chest—Lung fields clear.

As the patient was very anaemic two blood transfusions were given on 22-10-69 and 24-10-69. She had no difficulty in micturition after the episode of retention of

urine and vaginal bleeding was slight. When her general condition improved it was decided to first do a vaginal examination under anaesthesia and then decide the type of operation. Spinal anaesthesia was given. Vaginal examination revealed a fundal fibroid hanging from the completely inverted uterus. No rim of cervix was felt. It was decided to do a vaginal myomectomy to reduce the bulk of the uterus and then open the abdomen to do a total abdominal hysterectomy. During myomectomy the whole uterus could be seen like an hour glass with a little constriction at the site of attachment of the fibroid. The uterine openings of the tubes were obliterated and were represented by small depressions. After enucleating the fibroid the endometrium over it was stitched up to prevent oozing and blood loss. On opening the abdomen the ovaries and outer ends of the tubes were seen lying outside the depression caused by the inversion. The right ovary was enlarged and cystic and hence had been mistaken clinically for the body of the uterus at the time of admission. There was no difficulty encountered during hysterectomy. The uterine arteries were seen clearly at the left and right lateral edges of the inverted uterus. Patient tolerated the procedure well, two more blood transfusions were given during the operation. Patient was given intravenous Revivine for 3 days postoperatively and was discharged after two weeks.

Comment: In this case a fundal submucous fibroid was extruded from the uterus. It may have gradually given rise to inversion to start with but later became complete on the day the patient had profuse vaginal bleeding and retention of urine.

Case 4: Chronic Inversion due to fibroids.

A 50 years old patient was admitted on 17th July 1970 with a history of something coming out through the vagina since the last four years. The protruding mass was small in size but gradually increased to the present size. With this the patient developed marked frequency of micturition and at times even dribbling of urine.

Menstrual History: Menopause since last two years.

Obstetric History: 3 F.T.N.D. all living, last delivery was 16 years ago, one abortion of 4 months—7 years ago.

On Examination: Patient was an ill nourished, feeble looking elderly female. There was no anaemia. Pulse was 70 per minute. Blood pressure 110/70. Cardiovascular and respiratory systems were normal.

On vaginal examination, protrusion which looked like the cervix was lying out of the vulva. There was no external os visible anywhere but there were 2 small masses of the size of grapes on the lowermost anterior surface of the mass. The whole mass was oedematous with marked ulceration of the anterior and posterior vaginal walls over a wide area. The urethra appeared to be normal. There was no cystocele or rectocele and the condition was mistaken for procidentia with marked ulceration of the vaginal walls.

Red blood cells—4,000,000 per cumm. Haemoglobin—10 gms. Blood urea—29 mgm%. Blood sugar—100 mgm%. Blood group—A Rh positive. Urine—Normal. Screening of chest showed unfolding of aorta and chronic bronchitis.

The patient was put on low dosage estrogen therapy. The protruding mass was pushed into the vagina as it got infected with urine during micturition and glycerine acriflavine pack was used to clean the ulcerated surface as well as to keep the mass in the vagina. After a month the upper part of the vagina healed and it was decided to tackle this case through the abdomen. Patient was operated on 29-8-70 under spinal anaesthesia. On opening the abdomen to our surprise we found that we were dealing with a case of chronic inversion of the uterus. Both ovaries and fimbriated ends of the fallopian tubes were lying outside the cup shaped depression caused by the inverted uterus. The uterine arteries were not visible at the periphery of the inversion. So it was decided to separate the tubes and ovaries first and then look for the uterine vessels but this procedure did not help and we had to divide the posterior rim of the inversion funnel in the midline until we could correct the inversion. After correcting the inversion we could see the uterine vessels clearly and a

total abdominal hysterectomy was done. The patient tolerated the procedure well, one blood transfusion was given during the operation. Specimen of the uterus showed two small grape sized submucous fibroids on the fundal region. The post-operative period was uneventful and the patient was discharged two weeks later.

Comment: This patient may be a case of inversion due to the presence of two submucous fibroids which were probably not heavy enough to cause inversion by their weight alone or this patient may have had inversion of the uterus at the time of her abortion, in which case she was able to survive with the inversion for many years without any serious complications. When we saw her, the inversion was complete and hence we mistook it for an ulcerated, infected procidentia. At operation the only difficulty encountered was locating the uterine vessels, the most important step of the operation.

Discussion

As regards the treatment of acute inversion of the uterus replacement of the uterus is advocated but there seems to be a controversy about the time of replacement. Shock and haemorrhage are the immediate complications of inversion. Many writers are of the opinion that if shock has set in replacement must be done after the shock is treated, whereas a few writers advocate replacement with or without anaesthesia since they have found that the condition of the patient improved after replacement, as the shock is neurogenic due to the pull on the nerves and nerve plexuses in the infundibulopelvic and broad ligaments. A case has been recorded by Wagle and Kohiyar where haemorrhage was controlled by applying a tourniquet to the inverted uterus by means of a rubber catheter at the level of the uterine arteries. We feel that if the acute inversion occurs in a well equipped institution and is diagnosed early, immediate replacement is the best

but very often these cases are home deliveries and transferred to hospital in a very bad condition as in the case recorded here where immediate replacement was out of the question. Chronic puerperal inversions are often complicated by sepsis and anaemia due to blood loss and can well be treated by antibiotics, blood transfusions and iron therapy before undertaking operations either by the abdominal or the vaginal route. Mortality in acute puerperal inversion varies from 16% to 40%. In our case the mortality was due to shock. The 'dai' twisted the whole uterus with the attached placenta through ignorance in an effort to detach the placenta.

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