PUERPERAL INVERSION OF UTERUS
(Report of 5 Cases)

by

ANILA SEN GUPTA,* M.B.B.S., D.G.O. (Cal.), M.O. (Cal.)

and

HIMANSU DATTA GUPTA,** M.B.B.S., D.G.O. (Cal.), M.R.C.O.G. (Lond.)

Inversion of uterus is a condition in which uterus turns inside out, the fundus prolapsing through the dilated cervix. This interesting but dangerous obstetrical condition is rarely seen by many obstetricians in their professional career. The frequency of inversion of the uterus has been estimated by various authors from nil in 250,000 labours. (Beckmann) to 1 in 2000 Kerr (1964). Das (1940) from India reported a frequency of 1 in 23,127 deliveries. Domadia *et al,* (1969) reported 2 cases of puerperal inversion amongst 10,848 deliveries. Ghosh (1972) reported the incidence at Chittaranjan Seva Sadan, 1 in 40,000 deliveries. At Imambara Hospital, Hooghly, West Bengal, 5 cases of puerperal inversion were encountered in 21,693 deliveries from May 1967 to October 1971 (3 came from other places). The object of this paper is to add more cases of inversion of the uterus to the existing literature and to evaluate the successful role of "Knee chest position" in reposing the inverted uterus. Short history of the cases are appended below:

*Gynaecologist, Imambara Hospital Hooghly, West Bengal.

**Gynaecologist, Imambara Hospital, Hooghly, West Bengal.

*Present address—Lecturer, N. R. S. Medical College, Calcutta.

**Present Address—Gynaecologist, S. N. Pandit Hospital, Calcutta.

Received for publication on 31-5-1973.

Case 1.

Acute inversion of the uterus: Sm. A. B., 36 years, 6th para, delivered at home by an untrained midwife on 10-4-68. Patient had a chronic cough. Four hours after delivery she sat in a squatting position to pass urine and while straining, she had a severe bout of cough and felt mild lower abdominal pain. She could not pass urine. She also felt that something was coming down per vaginam. The midwife was called again, who thought the inverted uterus to be the head of another baby, pulled out the whole mass and the patient developed severe shock. After preliminary treatment of shock in a nearby Health Centre the patient was transferred to Imambara Hospital on 16-4-68 (i.e. six days after delivery).

On admission she was pale, temperature 100.4°F pulse 120 per minute, B.P. $\frac{90}{60}$ mm. of Hg. Fundus uteri was missing on abdominal palpation even after catheterization.

On pelvic examination vagina was occupied by a large, soft mass, covered with slough and it was not possible to reach the cervix. She was given 300 ml. of blood and was put on Terramycin 100 mg. injection twice daily. Next morning the inverted mass which was covered with thick slough was cleaned with hydrogen peroxide and gentle attempt to replace succeeded partially and the mass was covered with gauze soaked in glycerine acriflavine (1 in 1000 dil). This process was repeated daily. On 11th postpartum day in order to clean the posterior surface of the mass, while turning the patient, the patient was inadvertantly put on modified 'knee chest position'

and the mass suddenly went inside the vagina and with further gentle pressure complete replacement took place. Methergin 1 tablet three times daily for 3 days were given and the patient went home on 17-5-68 after her chest condition was improved.

Case 2

Acute inversion of uterus:- R. P., 18 years, primipara, was admitted to Imambara Hospital in a moribund condition on 2-12-69. The history was that soon after the birth of the baby the attending midwife pressed the uterus repeatedly to deliver the placenta. Though the placenta came out the patient started to bleed heavily and a local doctor was called in, who plugged the vagina to control the bleeding.

On admission patient was in extreme shock. Blood pressure could not be recorded and the pulse was 160 per minute and feeble. After proper resuscitation a thorough clinical examination revealed that the fundus of the uterus was missing from its normal position.

Pelvic examination after removal of plug revealed a fleshy mass filling up the whole vagina and cervix could not be felt. There was no active bleeding during local examination. Vagina was re-plugged with gauze soaked in glycerine in acriflavine (1 in 1000 (dil). Seeing good result in case No. 1, on 4th post-partum day the patient was put in "Knee chest position" (no anaesthesia was given) and manual taxis was tried. The inverted uterus was reposed easily. She was given Methergin 1 tab. twice daily for 3 days and terramycin 250 mg. capsule 6 hourly was given. Patient went home on 29-12-69 in good condition.

Case 3

Acute inversion of uterus—J. B., 35 years, 7th para, was admitted to Imambara Hospital on 6-9-70 with slight labour pains and dribbling of liquor amnii. Her previous all deliveries were normal, except at 6th time she had manual removal of placenta. On 9-9-70 patient delivered normally by a pupil nurse, but the placenta was retained. Medical Officer on duty, while doing manual removal of placenta inverted the uterus with the placenta adherent. One of the author (A.S.G.), reposed the uterus with the adherent placenta and the patient was given usual resuscitating treatment. Uterine cavity was plugged with gauze soaked in glycerine in acriflavine (1 in 1000 dil) and the patient was given Inj. Ergometrine 0.5 mg. I M. 8 hourly for 24 hours and Inj. Terramycin 100 mg. I.M. 6 hourly. Uterine plug was removed after 24 hours. On 4th post-partum day when the patient squatted on a bedpan and strained to pass urine, the mass re-inverted. This time inversion could not be corrected even in "Knee chst position" and as the placenta was adherent, supra-vaginal hysterectomy was done on 15-9-70. By push from below and pull from above inversion was corrected before performing hysterectomy. Placenta was attached on the fundus uterus and was a placenta accreta. On 4th post-operative day patient complained of severe chest pain and respiratory distress and died within 1 hour.

Case 4

Acute inversion of uterus — R. K., 19 years, primipara, was admitted for delivery on 15-1-71. As there was hypotonic inertia 2 units syntocinon intravenous drip was given, 30-40 drops per minute. Patient was delivered normally by a pupil nurse on 16-1-71. (six hours after the syntocinon infusion was started). The nurse performed modified Crede's expression and pulled on the cord. The placenta was delivered but the patient had severe vaginal bleeding. The second author (H.D.G.) was present in the labour room, who diagnosed the case as acute inversion of uterus (Fundus uteri was missing from its normal position and inverted uterus was in the middle third of the vagina). Under general anaesthesia uterus was reposed manually. There was dramatic improvement within half an hour. Pulse which was 200 per minute before reposition dropped down to 140 per minute and blood pressure went up from 80/60 to 110/70 mm. Hg. Puerperium was uneventful and the patient went home on 30-1-71.

Case 5

Subacute inversion of uterus—K.D., 30 years, 5th para, was admitted on 4-4-71, with profuse vaginal bleeding for seven days. She was delivered at home 3 weeks before, by a local 'dai'.

On admission she was anaemic (Hb. 5.5 gm.%) and had slight temperature (99.4°F), pulse 110 per minute, B.P. 95/mm of Hg.

On abdominal palpation there was nothing significant.

On pelvic examination a polypoid mass was felt in the upper third of vagina, which was at first thought to be a fibroid polyp., which proved to be an inverted uterus on careful bimanual and rectal examinations, (there was definite cupping). Attempts to repose the uterus in "Knee chest position" failed. Haultain's operation with sterilization was done on 12-4-71. Postoperative period was uneventful and the patient was discharged on 2-4-71.

Discussions

On reviewing the recent literature it seems, that inversion of uterus is not so uncommon as was previously thought. Jhirad (Quoted by Masani) recorded from Cama Hospital, Bombay, 10 cases of inversion of uterus. Heera and Do Rosario (1966) recorded 2 cases of puerperal inversions in 4 years, Sammaree (1965) of Baghdad had 11 cases between 1939 to 1963. Jacob and Bhargava (1969) reported 8 cases in 6 years period. The present authors saw 5 cases between May 1967 to October 1971. A number of cases of inversion of uterus have been reported in recent literature and that may be due to, (1) more patients are now-a-days attending the hospital, (2) some of the patients who were previously lebelled as "Death from Obstetric shock" are actually cases of inversion. Better treatment of shock and haemorrhage could enable us to see more such cases.

Inversion is more common in primiparae and according to statistics nearly 50 per cent of cases occur in primiparae. Various explanations are put forward to explain the greater frequency in primiparae e.g. uterine atonicity, fundal attachment of the placenta and Holme's (1899) neurosis theory. In our series 2 out of 5 cases were primiparae. In Jacob and Bhargava (1969) series, 2 were primiparae and 6 multiparae. In Jhirad's 10 cases, 4 were multiparae and 6 primiparae. We think that the frequency of inversion depends more on the nature of obstetric practice than on parity. In our series 3 out of 5 cases were delivered by 'dai' and one by a pupil nurse. All the cases of Jacob and Bhargava's series were from low socio-economic status and all were delivered outside by 'dais'.

In the present series (out of the 5 cases), 2 took place in our hospital and immediate reposition in the usual way was successful (Cases 3 and 4). But, in Case 3 the uterus reinverted. In this case and as well as in all the other cases who came from outside, reposition of the uterus was attempted in "Knee chest position". The method was successful in cases 1 and 2, but failed in cases 3 and 5. Most of the obstetricians must have noticed during operation how the "air pressure" helps to dislodge a foetal head or tumour impacted in the pelvis. Similarly, the "air pressure" might have helped in "Knee chest position" to repose the uterus by ballooning the vagina and pushing up the uterus. Gravity also might have some role in reposition. The cause of failure in case 3 was the bulk of the uterus and in case 5 adhesions above, as the patient came 3 weeks after delivery. It is too early to advocate anything in favour of "Knee chest position" during reposition. But from cases 1 and 2, it appears that "Knee chest position" and introduction of a device reverse of Vaccum Extractor might replace hydrostatic method which we think is rather messy.

Haultain's operation was performed in case 5. Haultain's operation is preferred because the operation is easier to perform since the whole procedure can be carried

out under vision. Spinelli's operation is not suitable in cases where there are dense adhesions.

Acknowledgement

We express our sincere gratitude to Dr. G. C. Nandi, F.R.C.O.G. for his kind assistance in preparing this paper. We wish to thank Dr. S. B. Sen Gupta, Superintendent, Imambara Hospital, for allowing us to publish the hospital data.

References

1. Das, P. C.: J. Obst. & Gynae. Brit. Emp. 47: 525, 1940.
2. Domadia, M. M., Shah, S. H., and Sequeira, E. J.: J. Obst. & Gynae. of India, 19: 406, 1969.
3. Ghosh, N.: J. Obst. & Gynae. India, 22: 203, 1972.
4. Herra, P. and Do Rosario, Y. P.: J. Obst. & Gynae. India, 16: 81, 1966.
5. Howkins, J.: Text Book of Gynaecology, London, 1962, J. A. Churchill.
6. Jaboc, S. I. and Bhargava, H.: J. Obst. & Gynae. of India, 19: 134, 1964.
7. Jhirad, J.: Quoted by Masani, K. M. Text book of Gynaecology, ed. 4 Bombay 1964, Popular Book Depot.
8. Murro Kerr, Operative Obstetrics: ed. 7 London 1964 Bailliere, Tindall and Cox.
9. Samarrae, K.: J. Obst. & Gynae. Brit. Cwlth. 72: 426, 1965.