ANALYSIS OF 14 CASES OF PUERPERAL INVERSION OF UTERUS

by

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Introduction

Puerperal inversion of the uterus is a common but potentially lethal obstetric complication. Osler declared, "The way to diagnose rare conditions is to remember their possibility". Puerperal inversion is no exception.

Clinical Material

The clinical data and management of 14 cases of puerperal inversion of uterus diagnosed and treated at the Postgraduate Institute of Medical Education and Research, chandigarh between July 1, 1974 to June 30, 1979 are presented. During this period total deliveries were 10,360. The incidence of inversion in this series worked out to 1:740.

All these cases had their deliveries supervised by indigenous "dias" or nurses and were referred to P.G.I. after occurrence of the complication.

Ten patients (71.4%) were in the age group of 20-24 years, 3 (21.4%) between 25-29 years, and 1 (7.2%) was 30 years old, while 9 (64.3%) were primiparae, 3 (21.4%) were secundiparae, and 2 (14.3%) were third parae.

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TABLE I

Factors Contributing to Inversion

Factors contributing	No. of patients	Percentage
Mismanagement of 3rd stage of Labour (cord traction, cord traction with fundal pressure and fundal pressure alone)	5	35.7
Manual removal of placenta	2	14.4
Lack of use of oxytocics at anterior shoulder or during 3rd stage of labour	13	93.1
Sudden increase of intra-abdominal pressure	1	7.2
Precipitate Labour	1	7.2
Prolonged labour with oxytocin	1	7.2

Some patients had more than 2 contributory factors.

In 9 out of 14 cases (64.33%), the placentae delivered spontaneously. Mismanagement of the 3rd stage of labour (i.e. cord traction alone, cord traction with fundal pressure, and fundal pressure alone), was present in 5 (35.1%) cases and in 2 of these manual removal of placenta was an additional contributory factor. Thirteen out of 14 cases (93.1%) had no oxytocics administered either at the delivery of anterior shoulder or during the 3rd stage of labour. In 1 patient in whom the placenta had delivered spontaneously, inversion was precipitated while attempting to sit up. One patient, a 3rd para, had precipitate labour

and 1 had prolonged labour requiring oxytocin augmentation.

TABLE II
Associated Third Stage Complications

Complication	No. of patients	Percentage
Post-partum haemorrhage	13	93.1
Shock	6	42.9
Retained placenta with P.H.H.	3	21.9
Acute retention of urine	3	21.4
No complication	1	7.1

Some patients had more than one complication.

1 patient was treated for shock at a PHC and reported to P.G.I. 9 months post-partum.

Post-partum haemorrhage was the commonest complication, in 13 cases (93.1%). Shock was present in 6 (42.9%) cases. Three (21.4%) cases had retained placenta and acute retention of urine each, and 1 patient reported to have suffered no 3rd stage complications.

The diagnosis of inversion was made by the attending dia/nurse in 8 cases (57.1%) and attempts at manual reposition made in 7 out of these. One patient was referred to a PHC where manual reposition was attempted about 2 hours after occurrence of inversion.

Only 5 cases out of 14 (35.7%) reported to P.G.I. within 24 hours of delivery, 2 (14.3%) reported within 6 weeks of delivery, and the majority (50%) after 6 weeks postpartum.

Nine cases (64.3%) had second degree inversion and 5 (35.7%) had third degree inversion. There was no case of first degree inversion.

In the patients who presented within 24 hours of delivery all had postpartum haemorrhage and shock, acute retention of urine was present in 2 (40%), retained placenta and DIC in 1 patient each

TABLE III
Clinical Presentation on Admission to P.G.I.

Presentation	No. of patients	Percentage
Within 24 hours (5 cases)		
P.P.H.	5	100.0
Shock	5	100.0
Retained placenta	1	20.0
Acute retention of urine	2	40.0
D.I.C.	1	20.0
24 hours—6 weeks (2 cases)		
Puerperal sepsis	2	100.0
Secondary P.P.H.	2	100.0
Severe anaemia	2	100.0
Intermittent retention of urine	1	50.0
After 6 weeks (7 cases)		
Menstrual disturbances	7	100.0
Chronic anaemia	6	85.7
Endometritis	4	57.1
Mass at introitus on straining	2	28.5
Acute paranoid reaction	1	14.2

Some patients had more than one clinical presentation.

puerperal sepsis, secondary P.P.H. and severe anaemia were present in all the patients who presented within 6 weeks postpartum and intermittent urinary retention was complained of in addition by 1 patient. Patients who presented after 6 weeks invariably had menstrual disturbances (100%) in the form of menorrhagia and metrorrhagia, chronic anaemia in 85.7% cases, endometritis in 57.1% and 2 (28.5%) also complained of mass appearing at the vulva on straining.

Management

Of the 5 patients who presented within 24 hours of delivery, 1 with acute paranoid reaction absconded from hospital before the inversion could be treated. In all the remaining 4, after correcting shock and hypovolemia repidly, manual reposition under general anesthesia was undertaken. In 2 of these, this manoeuver

alone was successful. Of the remaining 2, 1 had uterine perforation detected after manual reposition was done and she underwent a subtotal hysterectomy. The other patient continued to have intractable P.P.H. even after manual reposition and oxytocics and she also had abdominal total hysterectomy.

Of the 2 who presented within 6 weeks postpartum. 1 underwent successful manual reposition under anaesthesia, while 1 underwent Kustners' operation after manual reposition had failed due to the presence of a tight cervical contraction ring.

Of the 7 cases who reported 6 weeks or more after their delivery 3 were treated by Kustners' operation, 2 by Haultain's operation, and 2 by Dobin's procedure.

Maternal Morality

Only 1 patient was lost out of the 13 who were treated. Death was due to massive pulmonary embolism in a case of acute puerperal inversion where total abdominal hysterectomy was done for failure of manual reposition and intractable P.P.H.

Discussion

The incidence in the present series was 1 in 740 deliveries, and is the same as that reported by Harer and Sharkey (1940). These were the cases refered from outside after the occurrence of the complication.

A significantly large percentage (71.4%) of patients were in the age group of 20-24 years.

The incidence of primiparae in the present series was 64.3%. The figure is consistent with figures of 52.67% reported in the literature (Das 1940, Harer and Sharkey 1940).

In the present series, placentae delivered spontaneously in 9 out of 14 cases (64.3%). However, all of these patients had postpartum haemorrhage and quite understandably must have undergone unwarranted manipulations in an effort to control it. In 5 (35.7%) there was definite history of 3rd stage of labour being mismanaged and manual removal of placenta was a contributory factor in 2 of the above 5 cases. Just how manual removal of placenta can cause inversion is not clear but pulling on an incompletely separated placenta or production of suction by the operators hand with the fundus inverting upon its withdrawal have been responsible. One significant finding in this series was the lack of use of oxytocics in all but 1 case.

The single most frequent complication was that of postpartum haemorrhage which occurred in 93.1% of cases in this series. Other reports have emphasized the importance of this complication (Das, 1940; Fenton and Singh, 1950; Kitchein *et al* 1975) and it is apparent that a high index to suspicion of inversion of uterus should be maintained in all cases of postpartum haemorrhage.

Shock, the second most common complication, was present in 42.9% of cases. Whether it was haemorrhagic or neurogenic or combined is difficult to state, but in the 5 cases of acute inversion in this series the patients responded dramatically to blood volume replacement.

In the acute inversion group rapid correction of shock and blood loss, followed by successful manual reposition was undertaken in all cases. In 2 patients with acute inversion abdominal hysterectomies had to be performed for perforated uterus and intractable postpartum haemorrhage respectively.

Manual reposition is possible in subacute cases provided the cervical con-

traction ring is pliable and stretchable under general anaesthesia.

There is no doubt that in chronic inversion surgical reposition is the treatment of choice. There does not appear to be much to choose between abdominal and vaginal approach.

In the past, mortality rates have ranged between 14-70% (Fenton and Singh, 1950). In the present series, the mortality rate was 1 out of 13 (7.6%) and this was a death not directly related to the complication or its management.

Conclusions

1. Puerperal inversion of the uterus may not be as rare a complication as is widely believed.

2. In a large percentage of cases it is preventable provided mismanagement of 3rd stage of labour is avoided.

3. Active management of 3rd stage of labour may help prevent the occurrence of the complication.

4. A high index of suspicion of inversion needs to be maintained in all cases of postpartum haemorrhage and shock.

References

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