

ACUTE PUERPERAL INVERSION OF THE UTERUS

(A Case Report)

by

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Three factors are considered to be responsible for inversion of the uterus.

(1) Sudden emptying of the uterus after distension of its cavity.

(2) Thinning of its walls by the gradual development within it of some tumour, either physiological or pathological, and

(3) A dilated cervix.

Causes of inversion are either located in the uterus itself or such as act on the fundus either from above or from below and are classified as—(a) puerperal, and (b) non-puerperal.

(A) *Puerperal inversion*

Puerperal inversion of the uterus is spontaneous in a number of cases. (Beckmann—Quoted by Das, 1940—46 per cent of his series). Many additional factors are incriminated in the aetiology. They are—(i) undue suprapubic pressure, (ii) traction on the cord, (iii) laxity of the abdominal muscles, (iv) anomalies of the foetus, (v) anomalies of the placenta, (vi) traction on the membranes, and (vii) mismanagement of the third stage of labour.

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The fundal attachment of the placenta is found to be so general in cases of inversion that it has been regarded as almost essential to its production (Das, 1940).

The inversion is more frequent in primiparae. Some authors (Beckmann, Crampton, Vogel—Quoted by Das, 1940; and McCullagh, 1925) reported that 50 per cent of cases occurred in primiparae, while in Das (1940) series 52 per cent cases belonged to primiparae. The greater incidence in primiparae might be due to—(a) the atony of the uterus after protracted labour (more common in such patients), (b) the greater incidence of fundal attachment, and (c) sudden escape of accumulated blood from the narrow vagina and vulva of a primiparae (Furst, 1882).

(B) *Non-puerperal inversion*

Fibroid tumour of the uterus is frequently responsible for non-puerperal inversion. Sometimes sarcomas and carcinomas of uterus caused inversion. Das (1940) observed 87 per cent of non-puerperal inversions were due to fibroids and rest were due to sarcomas and carcinomas.

This case is presented because of its rarity.

CASE REPORT

Mrs. A., 24 years old, 2nd gravida, was admitted in a private nursing home at Nagpur on 31-5-1973 with 8 months' amenorrhoea and labour pains. General and systemic examinations did not reveal anything in particular. Uterus was 36 weeks size, vertex, LOA presentation, head engaged, foetal heart sounds good and uterine contractions were also good. Her labour progressed smoothly and she delivered a living female child weighing 4½ lbs. by the author in a private Nursing Home on 31-5-1973 at 5.30 P.M. A loop of the cord was found round the neck which was clamped and cut first before the delivery of the baby. Just after the delivery patient started profuse vaginal bleeding and complained of severe pain in the lower abdomen with giddiness and uneasiness.

On abdominal examination, uterus was not felt. On vaginal examination the uterus was found to be inverted and lying in the vaginal canal with partially separated placenta attached to the fundus.

As the patient was going into shock with pulse rate 120/mt. and blood pressure 80/60 mm. of Hg., resuscitation measures were taken at once and blood transfusion was arranged. The placenta was removed manually before reduction and it came out easily (The cord was found to be relatively short). The uterus was reduced by manual reposition and intravenous methergine was given with the hand still in the uterine cavity. When the uterus started contracting well, the hand was removed. The uterus was now palpable on abdominal examination. The blood pressure improved immediately and it came upto 100/70 mm. of Hg. Antibiotics were given. She had an uneventful recovery thereafter.

Discussion

The present case was 24 years old and she was second gravida. 53.6 per cent of the case reported by Das (1940) occurred between the ages of 21 and 30 years; and according to him 52 per cent were in primiparae. The data collected from the Indian literature for the past five and half years showed that 6 (35.2 per cent) out of 19 cases of puerperal inversion were primigravidas (Table 1).

In the present case, the causes of acute inversion of the uterus might be (i) the umbilical cord was short and it was made still shorter by winding around the neck of the foetus, so that during delivery this short cord might have caused undue traction over uterus; (ii) secondly the placenta was inserted over the fundus. It was suggested by McCullagh (1925) that the increased local vascularity produced by fundal attachment of the placenta so undermines the muscle fibres and destroys their tonicity that resulting weakness produces inversion. Atthill (1924) thought 'the fundus is the most susceptible portion of the uterus to irritation and the presence of the placenta in that area excites expulsive contraction like a foreign body, so causing inversion'. Therefore, in the present case, both the factors i.e. short cord and fundal attachment of the placenta, caused acute inversion of the uterus.

In the management of acute inversion of the uterus the authors considered preliminary resuscitative measures with more aggressive therapy for shock and loss of blood as important. The manual replacement was tried in the present case and it was successful. Some authors preferred O'Sullivan's hydrostatic method to manual reposition.

Comments over the reported 20 cases (including the present one) from the Indian literature during last five and half years (Table 1), it is obvious that the puerperal inversions are more common in the age group of 21 to 30 years. Out of 17 cases, 11 (64.7 per cent) belonged to this group (in two cases age is not mentioned, while all the three non-puerperal cases were observed in older age-groups (40 to 50 years). Similar findings were reported by Das (1940). In the puerperal group acute inversions are more common

TABLE I
Report of 19 Cases of Inversion of Uterus From India Between 1967-1973

Author	Year	Total No. of cases	Para	Age Yrs.	Puerperal			Remark
					Acute	Chronic	Non- puer- peral	
Ashar et al	1967	5	(a) I	16	Acute	—	—	Alive
			(b) V	28	-do-	—	—	Dead
			(c) I	—	-do-	—	—	Dead
			(d) III	30	-do-	—	—	Alive
			(e) II	22	-do-	—	—	Alive
Sharma, D.	1969	2	(a) VIII	45	—	Chronic	—	Alive
			(b) I	26	—	-do-	—	Alive
Domadia et al	1969	3	(a) Primi	25	Acute	—	—	Alive
			(b) Primi	25	—	Chronic	—	Alive
			(c) II	45	—	—	(Polyp)	Alive
Joshi, L.	1970	1	Primi	20	Acute	—	—	Alive
Guha, M.	1970	1	Primi	23	-do-	—	—	Alive
Jacob, S. and Bhargava, H.	1971	1	Primi	—	Acute	—	—	Alive
Gupta and Agrawal	1971	1	I	22	—	Chronic	—	Alive
Ghosh and Das	1972	1	II	24	Acute	—	—	Alive
Daruwala and Vijayakar	1973	4	(a) I	20	Acute	—	—	Dead
			(b) Primi	25	—	Chronic	—	Alive
			(c) II	40	—	—	Non. puer.	Alive
			(d) —	50	—	—	-do-	Alive
Present case		1	I	24	Acute	—	—	Alive
Total:		20			12	5	3	Alive — 17 Dead — 3

as expected (12 out of 17) than chronic inversion. The ratio of acute to chronic puerperal inversion is 70.5 per cent (12) to 29.5 per cent (5) in the present series; while Das (1940) found out 73.4 per cent to 26.6 per cent respectively.

In the present series, out of 20 cases of inversion, 17 (85 per cent) were puerperal; while 3 (15 per cent) were non-puerperal type. This is quite in agreement with Das who reported 83.65 per cent puerperal and 16.35 per cent non-puerperal cases.

There were three fatalities in these 20 cases and all were of acute puerperal type and died of acute shock.

Summary

1. A case of acute puerperal inversion is reported.

2. The aetiology in general and probable causes in the present case are discussed.

3. Review (in short) of cases reported in last 5½ years from Indian literature is done.

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