CERVICAL RUPTURE

(A Case Report)

by

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Failure of os externum to dilate despite strong normal uterine contractions ultimately leads to cervical rupture due to pressure necrosis. This may be ring pressure necrosis leading to annular detachment of cervix or sacculation of cervix may occur because of cervical displacement, as a result of which the presenting part may force its way either through the posterior lip or anterior lip of cervix causing partial detachment of cervix or partial annular detachment of cervix i.e. bucket handle tear.

CASE REPORT

Patient K, uneducated, but intelligent, 22 years of age originally belonged to Gorakhpur (U.P.) but presently her husband uneducated, a labourer, working in a mill at Khanna (Punjab), was admitted on 24-11-78 with the history of 8 months and 9 days amenorrhoea and vaginal bleeding since 3 days. Vaginal bleeding was moderate in amount but at the time of admission in the hospital, it was negligible.

OBSTETRICAL HISTORY

Patient was married for the last 4½ years, 4th gravida para II. She gave hisory of 2 home deliveries, first male child 3 years and 5 months back, second female child 2 years and 2 months back, both children alive and healthy. Babies were of average weight, first baby was smaller than the second. The deliveries were very easy. She gave history of an abortion of about 2 months in March, 1978 and after which she did not menstruate. On 24-11-78 patient was admitted in this hospital as a case of 36 weeks pregnancy with antepartum haemorrhage.

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MENSTRUAL HISTORY

Age of Menarche 13 years. Menstrual cycles, 3-4/28-38 days, irregular, moderate, painless, L.M.P. 8 months and 9 days back.

ON EXAMINATION

Patient was about 5'-2" in height, thin built, poorly nourished, cold clamy, tongue pale, pulse 136/mt. regular, feeble, equal on both sides, B.P. 70/40 mm Hg., no oedema of the feet.

SYSTEMIC EXAMINATION: N.A.D.

LOCAL EXAMINATION

Height of uterus 36 weeks, longitudinal lie, head occupying the lower pole, free, L.O.T., F.H.S. absent.

INVESTIGATIONS

Hb. 4 gm.%, T.L.C. and D.L.C. within normal, Urine examination—N.A.D., Blood group B Rh +ve.

MANAGEMENT

Patient was put on supportive line of treatment. On 30-11-78 patient had a bout of bleeding. So examination under anaesthesia was done. Placenta was low lying, perforation of placenta with internal podalic version and breech extraction was done, a dead macerated baby 5 lbs. in weight delivered at 1.30 p.m. Placenta delivered spontaneously. P.V. examination done. On exploring the cavity of the uterus, some abnormal feeling led to visualization of cervix by speculum examination which revealed an old cervical rupture. External os of cervix admitted tip of one finger. Photographs were taken before and after repair of cervix (Figs 1 and 2). Patient was given antianaemic, antibiotic treatment alongwith local

care of the wound. On 7-12-78 patient was discharged on request with treatment and contraceptive advice, as patient was not fit for sterilization operation. Patient was explained about the risk of pregnancy. She was not willing for vasectomy by her husband. However, she assured that she will get her tubectomy operation done at a later stage, which she got done on 16-4-79.

Discussion

Cervical rupture is a rare complication of labour. Jeffcoate (1975) describes, "Rare obstetrical injury of the cervix include: (1) detachment of a part of the cervix, usually the anterior lip which becomes imprisoned between the presenting part and the symphysis pubis, (2) annular detachment of the vaginal portion of the cervix—this occurs during long labours in which the external os fails to dilate-cervical dystocia, (3) cervico-vaginal fistula formation. This results from the birth of the baby through the wall of a sacculated cervix instead of through the External os."

The first report in the literature is of annular detachment of vaginal portion of cervix by Scott in 1821. In 1933, De Costa reported a case and quoted previous 16 instances of this complication in the literature, Ingraham and Taylor 1947 analysed 55 reported cases in the literature including 1 of their own. 75% of the cases occured in primigravida. A note of rigid cervix was made in 17 cases. Failure of the cervix to dilate was a prominent feature in all cases. In 25% cases, cephalo-pelvic disproportion was an associated feature. McMath in 1950 reported a case of detachment of posterior lip of the cervix during her second labour. Browne (1973) quotes a figure of about 120 cases reported in the literature. Chassor Moir (1976) has had the experience of several such cases. Kawathekar *et al*, (1976) described 2 cases at M.R. Medical College, Gulbarga during a period of 6 years of general as well as private practice.

The essential pathology underlying the condition is the failure of the external os to dilate during labour. Rigid cervix (Ingraham and Taylor 1947 and Ian Jackson 1976) and spasm of the lower uterine segment (Lindgren Smyth 1961) contribute to the condition. 75% cases occurred in primigravida (Ingraham and Taylor 1947). In multigravida, the external os may fail to dilate because of scar formation in it, which may be due to injury during previous childbirth or previous cervical cauterization or cervical conization or due to partial amputation of cervix (Browne 1976; Ian Jackson 1976).

Ingraham and Taylor (1947) in an analysis of 55 cases reported, noted cephalo-pelvic disproportion in 25% cases. Jeffcoate and Lister 1952 felt that in cases of cephalo-pelvic disproportion, the fit of the head to the cervix is not so tight as to lead to pressure necrosis and subsequent all round detachment of cervix. Kawathekar *et al* (1976) rulet out cephalo-pelvic disproportion in their cases. In the present case pelvis was not contracted.

Ingraham and Taylor (1947) observed that maternal mortality is due to shock and infection; foetal mortality is due to prolonged labour.

There are reports of cervical rupture in cases of mindtrimester induced abortions. Svane (1960), Berk *et al* (1971), Deshmukh *et al* (1979) reported cases of posterior cervical rupture with intra-amniotic hypertonic saline. Rajan (1978) reported 2 cases of cervical rupture after using intra-amniotic urea and oxytocin drip. Basak *et al* (1978) reported 16 cases of cervical fistula in 2120 cases of induced midtrimester abortions at Eden Hospital,

Calcutta during the period from June, 1972 to November, 1976. Kajanoja *et al* (1974), Rajan (1978) reported higher incidence of rupture when concomitent oxytocin drip was used. Cervical rupture usually occurs posteriorly either in the form of partial annular detachment, Kajanoja et al (1974), Rajan (1978), Rajan et al (1978) central vertical tear Bradly-Watson et al (1973), Rajan (1978), Rajan et al (1978). According to Willems (1974) risk of cervical rupture is often in a long or tumultous type of labour in young primigravidas, Kajanoja *et al* (1974) genital hypoplasia may be responsible for cervical rupture in primigravidas.

In addition to rigid external os, other factors responsible for cervical rupture may be some inherent weakness of the part and abnormally powerful uterine action. It was obvious from the appearance of the cervix in the present case that all her deliveries took place through the posterior cervical rupture only. From the history of the case, it appears that the patient had probably a tumultous type of first labour which lasted only for 3 hours or so. Other factors like some congenital anatomical weakness or anteriorly displaced rigid external os or both, might have also been responsible for cervical rupture in the present case.

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See Fig. on Art Paper I