Shoulder Dystocia

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Introduction

Shoulder dystocia implies difficulty in delivery of shoulders. It is relatively rare, yet alarming obstetric emergency and often occurs without predisposing risk factors [1]. Therefore, one should be familiar with this entity and know how to deal with it. Once it occurs, there is very little time within which to act, for a favourable foetal outcome. At the same time, a lack of knowledge, use of excessive force and undue haste in delivery is likely to result in severe trauma to the foetus and the maternal genital tract.

Case Report

A 23 year old primigravida, an unbooked case, was admitted at 41 weeks of gestation with labour pains since 4 hours. At the time of admission, there was no pallor or pedal oedema and she was normotensive. Uterus was term size and protuberant. It was a cephalic presentation and the head was engaged. She was getting 2-3 contractions every 10 minutes lasting 40 - 45 seconds each and foetal heart rate (FHR) was 130-150/min, regular. The approximate foetal weight estimated clinically was 4 kg. On per vaginal (PV) examination, cervix was 3 cm dilated and fully effaced; pelvis was adequate; station '+1'; membranes were bulging with contraction which ruptured while doing PV examination and the liquor was clear. The investigations done revealed - haemoglobin : 11 gm%, blood group : B+ve, VDRL : non reactor, blood sugar (random) : 104 mg% and urine analysis was normal.

At the same time, the possibility of shoulder dystocia was visualised but the decision to continue the trial of labour was taken since the pelvis appeared adequate and the head was engaged. Progress of labour was charted on a partogram, which showed satisfactory progress and the cervix was fully dilated 5 hours after admission. The FHR remained regular throughout and varied between 130 to 140/minute. The cervix remained fully dilated for an hour after which the head got delivered with uterine contractions and bearing down efforts of the mother. However, the shoulders got stuck up within the pelvis and did not get released despite applying downward traction on the head. Both maternal thighs were acutely flexed bringing the knees beside the chest but this failed to release the shoulders. There was no space available anteriorly. Hand was passed posteriorly into the vagina; the foetal arm was flexed at the elbow, foetal hand was

grasped and the arm swept across the foetal chest delivering the posterior arm. The anterior shoulder got easily disimpacted following the delivery of the posterior shoulder. The head to shoulder delivery interval was approximately 3 minutes. It was an alive female baby weighing 4.5 kg. There was mild birth asphyxia for which oropharyngeal suction and oxygen inhalation was given, to which the baby responded well. There was no evidence of any fracture or brachial plexus injury to the baby. There were a few vaginal lacerations which were sutured along with the repair of the right mediolateral episiotomy.

Discussion

Shoulder dystocia is a distressing obstetrical emergency. The obstetrician and the midwife should have a knowledge of this condition so that they can act in time and minimise neonatal trauma and asphyxia. Usually the delivery of the shoulders and trunk occur within 30 seconds of delivery of the head but when it exceeds 1 minute and 30 seconds it is termed as shoulder dystocia. It is associated with foetal complications such as brachial plexus injuries like Erb's palsy, fractures of clavicle and humerus, severe neonatal asphyxia and even neonatal death, if handled improperly. Although brachial plexus injuries, are primarily due to excessive traction applied at delivery in shoulder dystocia, some cases also occur without use of undue traction [2]. At the same time, maternal complications in the form of postpartum haemorrhage due to atony of the uterus along with cervical and vaginal lacerations may occur. Since the occurrence of shoulder dystocia cannot be predicted reliably in advance [3], one should be well versed with manoeuvres that may be required to tackle the situation. McRobert's manoeuvre which involves sharply flexing the legs upon the abdomen is highly successful in dealing with these cases [4]. In this manoeuvre, sharp flexion of legs upon the abdomen straightens the sacrum, relative to the lumbar vertebrae rotating the symphysis pubis towards the head of the patient which releases the anterior shoulder. Symphyseal separation with transient femoral neuropathy has been reported as a rare complication of McRobert's manoeuvre [5]. In this case, McRobert's manoeuvre was tried first but was not successful after which delivery of the posterior shoulder was resorted

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to, which helped in disimpaction of the shoulders. In delivery of the posterior shoulder, the posterior arm of the foetus is swept across the chest followed by its delivery. Subsequently, the shoulder is rotated into one of the oblique diameters of the pelvis followed by delivery of the anterior shoulder. Most of the injuries sustained while handling these cases are temporary and the commonest of these i.e. brachial plexus injury recover within an year of birth. Macrosomia appears to be the only parameter which is relatively more reliable in predicting the occurrence of shoulder dystocia [6]. Therefore, LSCS appears to be the logical option whenever macrosomia is suspected by clinical and sonographic assessment. Still a significant proportion of large foetuses have surprisingly easy delivery; therefore resorting to LSCS, on the basis of this criteria i.e. anticipated foetal weight 4-4.5 kg or more, may lead to a large number of unnecessary and avoidable operative deliveries. In fact, one extreme view held by some authors is that, since the damage caused while dealing with shoulder dystocia cases is often of transient nature and recover within one year, therefore, a trial of labour is worth considering in most of these cases, unless the estimated birth weight exceeds 5 kg [7]. However, we feel that one should resort to elective LSCS if there is a strong suspicion of shoulder dystocia in any case to avoid its associated morbidity.

In the end, we would stress that individualisation of cases along with the expertise available to deal with such an eventuality should be the guiding factors while dealing with cases of shoulder dystocia.

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