



Management of Dystocia in Buffalo by Subcutaneous Fetotomy: A Case Report

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ABSTRACT

A 5 year old buffalo was presented at veterinary clinical complex for correction of dystocia. The case was unsuccessfully handled by layman for the same. The visual and vaginal examination revealed a dead fetus with both forelimbs protruded from vulva and tightly impacted head with right lateral deviation. To resolve the case, subcutaneous fetotomy was performed with judicious use of traction and followed by a course of antibiotic, anti-inflammatory and antihistaminic to manage pain and prevent secondary bacterial infection. The case was recovered uneventfully. In conclusion, subcutaneous fetotomy can be used to resolve similar cases under field conditions.

Key words: Buffalo, Dystocia, Subcutaneous fetotomy, Head deviation.

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INTRODUCTION

In principle, dystocia results if any of three component of birth process is compromised *viz.* expulsive forces, adequacies of birth canal (uterine horn, body of uterus, cervix, vagina and vulva) with surrounding structures (pelvis, bladder and excess intra-pelvic fat) and abnormal size or disposition of fetus. Insufficient expulsive forces might be attributed to compromised uterine function due to uterine inertia or uterine torsion (Kumar *et al.*, 2014) or ineffective abdominal straining (Singh *et al.*, 2022). The birth canal is compromised in cases of pelvic constriction which

might be due to complete deformity, exostoses, neoplasms and pelvic immaturity or fracture (Kumar *et al.*, 2017), non-dilatation of cervix (Kumar *et al.*, 2020), incomplete relaxation of caudal vagina and vulva, vaginal cystocele (Kumar *et al.*, 2018a), tumors, pelvic obstruction by distended urinary bladder, torsion of uterus (Kumar *et al.*, 2014), displacement of pregnant uterus and insufficient expulsive forces. In addition, fetal causes of dystocia are grouped as fetal over size and faulty disposition. Fetal oversize may be associated with various fetal pathologies like fetal ascites (Singh *et al.*, 2010; Sheetal *et al.*, 2017; Singh *et al.*, 2020), fetal anasarca (Singh *et al.*, 2007), fetal

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hydrallantois (Singh *et al.*, 2014; Kumar *et al.*, 2018b), fetal hydramnios, fetal hydrocephalus and monster fetuses (Dhami *et al.*, 2000) and mummified fetus (Kumar *et al.*, 2018c; Singh *et al.*, 2018) etc. The maldisposition of fetus is comprised of faulty presentation, position and posture. In anterior presentation, one of the common type of postural abnormality is lateral deviation of head and neck causing dystocia in all species (Roberts, 1971; Rajashri *et al.*, 2014), which may arise during late gestation rather than during birth (Noakes *et al.*, 2009). Postural defects can usually be corrected by obstetrical manoeuvres, if treated early in the second stage of labor. However, in protracted cases or delayed cases the corrective mutational procedures cannot be applied for correction of fetal mal-dispositions. Manipulative delivery per vaginam often fails in such cases and fetotomy or caesarean hysterotomy should be regarded as a last resort. The present case addresses the successful management of irreducible lateral deviation of head using subcutaneous fetotomy and obstetrical manoeuvres.

CASE HISTORY AND OBSERVATIONS

A 5 year old buffalo was brought to the Veterinary Clinical Complex with history of second parity, full term pregnancy and unsuccessful attempts to deliver the fetus since last 15-20 hours. The case was already handled at the field level. The visual examination revealed that both forelimbs of the fetus were hanging out of the vagina (Fig 1) and on per vaginal examination cervix was found fully dilated with dry birth canal and right lateral deviation of head, which was impacted into the pelvic cavity. Based on the findings of the per-vaginal examination, it was diagnosed to be dystocia with deviated fetal head. It was decided to perform a subcutaneous fetotomy to deliver the fetus per vaginally.



Fig. 1: Buffalo with both fetal forelimbs protruded from the vulva

TREATMENT AND DISCUSSION

Subcutaneous fetotomy is performed by cutting fetal parts, usually the limbs, without removing the skin. It is usually done in emphysematous fetuses employing different types of knives. Prior to handling, the buffalo was administered with dexamethasone (20 mg, IM total dose), analgesic (Meloxicam @0.5mg/kg, IM) and anti-histamine (Chlorpheniramine maleate, 10 ml, IM). Then, after proper lubrication, the knife was carefully introduced into the birth canal of the animal. The skin of the fetus was incised from the scapular point to the metacarpal bone in the anterior presentation. The skin was detached from the muscles and other attachments by the operator's fingers. Then traction was applied on the limb under the skin using ropes. The limb broke off from the scapular or the hip joint and was taken out. Similarly, the other limb was also removed. Then, by locating the head of the foetus its position was corrected inside the birth canal. A knot was made with a rope in lower jaw of the foetus and by applying traction, the foetus was recovered successfully (Fig 2). Post obstetrical treatment the buffalo was medicated with Ringer's lactate 4 litre IV, 5% 4 litre Dextrose normal saline IV, 450mL Calcium Borogluconate slow IV. The antibiotic Ceftiofur sodium @ 1.1 mg/kg IM and analgesic Meloxicam @ 0.5 mg/kg IM were administered for 3 days. The animal recovered uneventfully.



Fig. 2: Delivered fetus

Lateral deviation of head is very common form of dystocia in cattle and buffaloes (Noakes *et al.*, 2009). The head may be displaced either right or left side. The presentation is typically of both forelimbs presented at the vulva, but, on vaginal examination, the head usually not present in the birth canal. If such cases are attempted during early second stage of labour this mal-posture can often be corrected by hand. However, if injudicious traction is applied to limbs without correction of head deviation, the fetal head is tightly impacted in birth canal with loss of fetal fluid as time is prolonged. Manipulative delivery per-vaginum often fails in such cases and fetotomy or caesarean

section should be regarded as last resort (Kumar *et al.*, 2019). Fetotomy is always better approach than caesarean section and if fetus is dead, the dystocia can be corrected using fetotomy operation with judicious traction (Kumar *et al.*, 2019).

CONCLUSIONS

In conclusion, the subcutaneous approach saves the female genitalia from injuries, helps in creating space in the birth canal of the dam for easy passage of the fetus.

CONFLICT OF INTEREST

None.

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