

MANAGEMENT OF DYSTOCIA BY PARTIAL PERCUTANEOUS FETOTOMY IN A NON-DESCRIPT COW : A CASE REPORT

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SUMMARY

A case of dystocia due to lateral deviation of head and neck in a cow and its successful management through percutaneous fetotomy, mutation and extraction is reported.

Key words: Cow, Dystocia, Percutaneous, Fetotomy, Mutation

Dystocia due to defects in birth canal and surrounding tissues or organs include pelvic constriction which might be due to complete deformity, exostoses, neoplasms and pelvic fractures (Kumar *et al.*, 2017), non-dilation of cervix, incomplete relaxation of caudal vagina and vulva, vaginal cystocele (Kumar *et al.*, 2018), tumors, pelvic obstruction by distended urinary bladder, torsion of uterus (Kumar *et al.*, 2014), displacement of pregnant uterus and insufficient expulsive forces. Postural defects can usually be corrected by obstetrical manoeuvres, if treated early in the second stage of labor. However, in neglected cases or cases already handled by layman, who applied force extraction without application of proper technique, may complicate the case. Manipulative delivery per vaginam often fails in such cases and fetotomy or caesarean should be regarded as a last resort. In anterior presentation, one of the common type of postural abnormality is lateral deviation of head and neck causing dystocia in all species (Rajashri *et al.*, 2014), which may arise during late gestation rather than during birth (Noakes *et al.*, 2009). The present case describes the successful relieving of irreducible lateral deviation of head and neck and unilateral flexion of forelimb through partial percutaneous fetotomy and obstetrical manoeuvres.

A non-descript first calf heifer around 200 kg body weight was presented at the Veterinary Clinical Complex, with the history of full term pregnancy. The owner called the quacks for the treatment of the case; however, after forced extraction by three persons only one limb could be withdrawn out of the vulva (Fig.1). Then, case was referred to Veterinary Clinical Complex for further treatment. Clinical examination revealed that animal was dull, depressed with pale conjunctiva and having continuous straining. The rectal temperature was 101°F with slight tachypnoea and tachycardia. Per-vaginal examination revealed that cervix was fully dilated, birth canal was dry and one limb was completely protruded out of vulva with soles facing ventral; and was identified as forelimb as first two joints showed flexion in the same direction. The second limb was flexed at the level of carpal joint however, head was not accessible.

To abolish abdominal straining and ease of obstetrical operation, Inj. Lignocaine hydrochloride (2%, 5ml) was administered between sacro-coccygeal space as epidural anaesthesia. An unsuccessful attempt was made to push the fetus into abdominal cavity by hand and even by crutch repeller. As fetus was tightly impacted in the pelvic cavity, no room was available for obstetrical interventions. Hence, fetotomy was decided to perform. The protruded forelimb was disarticulated by scalpel blade at the level of shoulder joint including scapula. Crutch was applied at the presenting bulk of the fetus and an assistant was directed to push the fetus into the cranial direction, when signaled by obstetrician. Simultaneously, obstetrician's hand guarded the crutch part of the repeller to ensure its proper positioning and to avoid its slipping. By pushing the fetus in cranial direction, space was created for manipulation. Afterwards second limb was accessed and disarticulated by scalpel blade from shoulder joint and withdrawn. Now, head and neck were palpable and extremely deviated downward. Then obstetrical hook was passed into the uterus and fixed to the fetal mandible bone. The dead fetus was relieved by applying gentle traction (Fig.2). Placenta was expelled along with the fetus. The treatment included Inj. Oxytocin 20 IU in 500ml NSS IV once and Inj. Calcium borogluconate 450 ml administered by slow IV route once, Inj. Meloxicam, @ 0.2 mg per kg BW, IM for 5 days, Inj. Chlorpheniramine maleate, 30 mg total dose IM



Fig.1: Dystocia in the cow

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Fig. 2: Fetus delivered per vaginum by percutaneous fetotomy

for 5 days and Inj. Ceftriaxone, 3 g, IM for 5 days were administered. The animal was recovered uneventfully.

In the present case, the birth canal was dry and the fetus was tightly impacted in the birth canal due to improper forced extraction by three persons. Lateral deviation of head especially in a dead fetus becomes life threatening for the dam due to uterine contractions in inappropriately treated cases (Sane *et al.*, 1994). Application of traction on the fetal forelimb without observing fetal head position results into further complication (Rajashri *et al.*, 2014). The present case was complicated due to severe traction by quacks without examination of the condition, which might have resulted in extreme deviation of head and neck. If fetus is dead, fetotomy is recommended to avoid caesarean section because it offers less assistance, shorter recovery time, less aftercare and low cost than caesarean section (Munroe and Jonker, 2014). When the calf is already dead, fetotomy

is the method of choice due to optimal cow survivability. Combination of fetotomy and mutational techniques made it possible to relieve the dystocia and deliver the dead fetus from the birth canal. Similar to the present case, Otonari *et al.* (1993) and Rao and Murthy (1994) also successfully managed such type of dystocia in cow. Thus, in conclusion, irreducible, tightly impacted fetus in pelvic cavity can be resolved by proper application of fetotomy and obstetrical manoeuvres.

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