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Surgical management of dystocia in Punganur cow due to Feto-pelvic disproportion by caesarean section

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Abstract

Caesarean section is potentially indicated in case of dystocia when live calf cannot be delivered by mutation and forced extraction. A 2-year-old full term pregnant Punganur heifer was referred with the anamnesis of parturition signs since previous day and water bag ruptured 2 hours before. On obstetrical examination the fetus was in normal presentation (P₁), position (P₂) and posture (P₃) with pedal and suckling reflex. Further vaginal examination revealed large size fetus which cannot accommodate the pelvic inlet for pervaginal delivery. The case was diagnosed as dystocia due to feto-pelvic disproportion. Hence, C-section was performed by lower flank approach. The post-operative therapy was given for cattle with antibiotics, anti-inflammatory for 7 days. The cow and calf had an uneventful recovery.

Keywords: Punganur cow, Feto-pelvic disproportion, Caesarean section, Para vertebral nerve block, Epidural anaesthesia

1. Introduction

Dystocia is termed as a delayed or troublesome calving that occasionally requires considerable amounts of human assistance (Arthur, 1989 and Roberts, 1971) ^[1, 10]. According to research on cattle, the fetus is the main contributor to dystocia, accounting for between one and five percent of all occurrences (Bennett, 2001 and Meijering, 1984) ^[3, 7]. According to Roberts (2004) ^[9], the excessive foetal size in relation to the maternal pelvis (Feto pelvic-disproportion) and aberrant presentation, position, and posture can be broadly classified as the foetal aetiology of dystocia. This issue most frequently affects heifers, where the fetus is of appropriate size for the breed but the mother pelvis is too small, according to Youngquist *et al.* (2007) ^[12]. Alternately, the fetus could be exceptionally huge and unable to pass through a normal-sized pelvic canal. In cattle and buffalo, the prevalence of narrow pelvis ranges from 7.79% (Phogat *et al.*, 1992) ^[8] to 9.2% (Sharma *et al.*, 1992) ^[11]. In such instances, the foetus can only be delivered surgically because forced traction could risk the lives of both dam and the foetus (Dutt *et al.*, 2017) ^[4]. Perusal of literature revealed that the caesarean section in Punganur breed of cow is not reported. A case of surgical management of dystocia in punganur cow due to feto-pelvic disproportion by caesarean section is reported.

Case history and observations

A 2-year-old full term pregnant Punganur cow was referred to the Large Animal Obstetrics Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal with parturition signs since previous day and water bag ruptured 2 hours before and it was attended by a practicing veterinarian. On obstetrical examination revealed oedematous vulva, fully dilated cervix and the fetus was in anterior longitudinal presentation (P₁), dorso-sacral in position (P₂) and extended limbs cum head (P₃) with pedal and suckling reflex, lying in the birth canal. Further vaginal examination revealed large size fetus which cannot accommodate the pelvic inlet for per-vaginal delivery. As a result, the case was identified as dystocia as a result of feto-pelvic disproportion. To save the life of fetus and dam, Caesarean section opted as a treatment.

Treatment

Under epidural anaesthesia and left paravertebral nerve block using 2% lignocaine the caesarean section was performed through left lower flank approach. After exteriorizing the abdominal muscles, the uterine incision on greater curvature was made. By holding both the hind limbs of fetus, a live male calf was delivered. After that, chromic catgut size 2 was used to close the uterine incision using the cushing's suture technique. The transverse abdominis muscle, internal oblique muscle and external oblique muscle were closed by continuous interlocking suture pattern using polyglycolic acid size 2. Skin incision closed by cross mattress suture pattern using sterile cotton thread. Neonatal care was given to that calf. Post-operatively the dam treated with Inj. Ringer's lactate 1 lit IV, Inj. Dextrose Normal Saline 1 lit IV, Inj. Ceftriaxone @ 20mg/kg IV, Inj. Chlorpheniramine maleate @ 0.5mg/kg I/m, Inj. Meloxicam 0.5mg/kg I/m. Antibiotic, analgesic and antihistaminic drugs continued for 7 days. On the 14th post-operative day, skin sutures were removed. An uneventful recovery had been noticed.



Fig 1: Epidural anaesthesia in sacro coccygeal space



Fig 2: Surgical site- left lower flank region



Fig 3: Closure of uterine incision by cushing pattern



Fig 4: Cow with calf after surgery

Discussion

Large fetuses cannot normally be delivered, hence the choice between a fetotomy and a caesarean section is typically based on the health of the dam and/or the fetus. Large fetuses must be delivered via caesarean section because of their limited birth canal. If a fetotomy fails to remove dead, large fetuses in a dilated birth canal, caesarean section is the only other option (Balamurugan *et al.*, 2018) ^[2]. One of the main causes of dystocia is foeto-maternal disproportion, which can be avoided with appropriate reproductive care. Dystocia is more likely to occur in heifers because they are often smaller than cows. Heifers should weigh at least 60% of their mature weight and average 66 percent of their adult weight during breeding (Gavit, SP., 2014) ^[5]. Foetal over growth, feto-pelvic disproportion, and insufficient cervix dilatation are all indications for a caesarean delivery (Roberts, 2004) ^[9]. For such serious dystocia, a Caesarean section is always chosen (Purohit *et al.*, 2013) ^[6]. Punganur cattle is One of the World's smallest humped cattle, which is originated from Chittoor district of Andra Pradesh and it was familiar for high fat content (up to 8%) in milk. As a consequence of excessive indiscriminate crossbreeding, this breed is in risk of becoming extinct.

Conclusion

Earlier diagnosis of the cause of dystocia and adopting proper treatment at right time can save the life of the fetus and dam.

References

1. Arthur GH, Noakes DE, Pearson H. Veterinary Reproduction and Obstetrics. (Theriogenology). 6th edn., ELBS, Bailliere Tindalle, London, UK; c1989. p. 295-300.
2. Balamurugan B, Dayanidhi J, Ramamoorthy M, Sushobhit KS, Deepesh G. Successful management of pre partum cervico-vaginal prolapse concurrent with dystocia in cattle: A case report. International Journal of Science, Environment and Technology. 2018;(7)2:613-617.
3. Bennett GL, Gregory KE. Genetic (co) variances for calving difficulty score in composite and parental populations of beef cattle: 1. Calving difficulty score, birth weight, weaning weight and postweaning gain. J Anim Sci. 2001;79:45-51.
4. Dutt R, Singh G, Gahalot SC, Sharma K, Yadav V, Patil SS. Successful management of a rare case of dystocia due to narrow pelvis associated with pelvic fracture in water buffalo. Research Journal for Veterinary Practitioners. 2017;5(3):3.
5. Gavit SP. Treatment of dystocia. Sanjay Gavit; c2014.

6. Purohit GN, Gaur M, Kumar A, Shekher C, Ruhil S. Perspectives of caesarean section in buffaloes. *Asian. Pacific. Journal of Reproduction*. 2013;2(3):229-237.
7. Meijering A. Dystocia and stillbirth in cattle: a review of causes, relations and implications. *Livestock Prod Sci*. 1984;11:413-77.
8. Phogat JB, Bugalia NS, Gupta SL. Incidence and treatment of various forms of dystocia in buffaloes. *Indian Journal Animal Reproduction*. 1992;13:69-70.
9. Roberts SJ, *Veterinary Obstetrics and genital diseases*. 2nd ed. Satish Kumar Jain for CBS publishers & distributors pvt. Ltd; c2004. p. 237-274.
10. Roberts SJ. *Veterinary Obstetrics and Genital Diseases* 2nd Ed. Edwards Brothers, Inc., Ann Arbor, Michigan; c1971. p. 308-313.
11. Sharma RD, Dhaliwal GS, Prabhakar S. Percutaneous Fetotomy in management of dystocia in bovines. *Indian Vet. J*. 1992;69:443-445.
12. Youngquist RS, Threlfall WR. *Current Therapy in Large Animal Theriogenology*. 2 ed. London: Saunders Elsevier; c2004. p. 310-333.