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Successful management of dystocia associated with perosomus elumbis in a crossbred jersey cow: A case report

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Abstract

A pluriparous, full-term pregnant crossbred Jersey cow was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal, with a history of natural service nine months earlier and straining for the previous three hours. Two ankylosed fetal hind limbs were protruding through the vulva. Clinical examination revealed an edematous vulva and congested vaginal mucosa. Per-vaginal examination showed a fully dilated cervix, posterior longitudinal presentation, dorsosacral position, bilateral extension of the hind limbs, absence of the tail, and absence of fetal reflexes. Based on the obstetrical findings, dystocia due to Perosomus elumbis was suspected. Under epidural anaesthesia, the fetus was repelled, the hind limbs were secured using obstetrical snares, and the dead female fetus was successfully delivered by mutation followed controlled forced traction. The cow was treated with intravenous fluids, broad-spectrum antibiotics, anti-inflammatory drugs, antihistamines, calcium therapy, and oxytocin. The animal recovered uneventfully without postpartum complications. This report demonstrates that vaginal delivery can be successfully accomplished in selected cases of Perosomus elumbis when the fetus is comparatively small and the birth canal is adequately dilated.

Keywords: Crossbred Jersey, Dystocia, Perosomus elumbis, Congenital anomaly, Mutation, Forced traction

1. Introduction

Perosomus elumbis (PE) is a rare, sporadic and invariably fatal congenital fetal anomaly primarily reported in cattle, although occasional cases have also been documented in buffaloes, sheep, goats and swine (Arthur *et al.*, 2009) [2]. The condition is characterized by complete or partial agenesis of the lumbar, sacral and coccygeal vertebrae, often accompanied by hypoplasia of the spinal cord, arthrogryposis, ankylosis of the hind limb joints, muscular atrophy, pelvic deformities and absence of the tail (Roberts, 1986) [3]. The exact etiology remains uncertain; however, both genetic predisposition and environmental factors such as teratogenic agents, nutritional deficiencies, infectious agents and toxic substances during early embryogenesis have been implicated (Son *et al.*, 2008) [5]. The absence of normal vertebral development and spinal innervation results in severe musculoskeletal abnormalities that restrict fetal movement and frequently interfere with normal parturition. Congenital fetal anomalies are an important fetal cause of dystocia in cattle, with Perosomus elumbis representing one of the rarest conditions encountered in obstetrical practice (Arthur *et al.*, 2009) [2]. Affected fetuses commonly present with rigid ankylosed hind limbs and abnormal pelvic conformation, preventing normal passage through the birth canal and often necessitating fetotomy or caesarean section (Son *et al.*, 2008) [5]. Successful vaginal delivery has been reported only in selected cases where the fetus is comparatively small and the birth canal is adequately dilated. The present report describes the successful management of dystocia caused by Perosomus elumbis in a full-term crossbred Jersey cow by mutation and controlled forced

traction, resulting in uneventful recovery of the dam.

Clinical history and observations

A pluriparous, full-term pregnant crossbred Jersey cow was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal, with a history of natural service nine months earlier, prolonged straining for the previous three hours, and two ankylosed fetal hind limbs protruding through the vulva (Fig.2). The animal had been initially attended by a field veterinarian; however, despite obstetrical intervention, delivery could not be achieved. On presentation, one of the protruding fetal hind limbs was fractured. Clinical examination revealed that the rectal temperature and respiratory rate were within normal physiological limits. Examination of the external genitalia showed an edematous vulva, severely congested vaginal mucosa, and serosanguineous vaginal discharge. Per-vaginal examination revealed a fully dilated cervix, posterior longitudinal presentation, dorsosacral position, bilateral extension of the fetal hind limbs into the birth canal, complete absence of the tail (Fig.1), and absence of fetal reflexes. Based on these characteristic obstetrical findings, a presumptive diagnosis of dystocia due to Perosomus elumbis (Fig.3), a congenital fetal anomaly, was made.

Treatment and discussion

Based on the history, clinical findings and presumptive diagnosis, the animal was initially stabilized with intravenous fluid therapy. Under caudal epidural anaesthesia, 3 mL of 2% lignocaine hydrochloride was administered into the sacrococcygeal epidural space. The cow was positioned in lateral recumbency on a hindquarter elevator. Following adequate lubrication of the birth canal with 2% carboxymethyl cellulose (CMC), the fetus was gently repelled into abdominal cavity create sufficient obstetrical space. The fetal hind limbs were secured using obstetrical snares, and the dead fetus was successfully delivered by mutation followed by controlled forced traction. Following delivery, the cow received Ringer's lactate, 25% dextrose normal saline, calcium borogluconate intravenously, and oxytocin (40 IU, IM) to promote uterine involution. Supportive therapy also included enrofloxacin (5 mg/kg body weight, IM), meloxicam (0.5 mg/kg body weight, IM) and chlorpheniramine maleate (0.5 mg/kg body weight, IM). The antibiotic, anti-inflammatory and antihistamine therapy was continued for three consecutive days. The cow recovered uneventfully without any postpartum complications and resumed normal health.

The obstetrical findings in the present case, including bilateral ankylosis of the hind limbs, absence of the tail, lack of fetal reflexes and posterior longitudinal presentation, were highly suggestive of Perosomus elumbis, allowing a presumptive diagnosis before fetal delivery. Similar clinical findings have been reported in affected bovine fetuses, where severe malformation of the caudal vertebral column and hypoplastic hindquarters interfere with normal fetal movement and predispose to dystocia. Recent reviews have highlighted that fetuses with Perosomus elumbis frequently present in breech or posterior longitudinal presentation because the dysplastic hind limbs are incapable of generating the propulsive movements required for spontaneous fetal repositioning during late gestation (Agerholm *et al.*, 2025) ^[1]. Early recognition of these characteristic obstetrical findings is therefore essential for selecting the most appropriate method of delivery while minimizing maternal trauma.

Although caesarean section remains the most frequently reported method for relieving dystocia associated with Perosomus elumbis because of severe fetal deformities, the present case demonstrates that vaginal delivery can be successful under favourable obstetrical conditions. The comparatively small fetal size, complete cervical dilatation, adequate lubrication of the birth canal and effective epidural anaesthesia facilitated fetal mutation and controlled traction, thereby avoiding fetotomy or surgical intervention. Similar recommendations have been made in recent reviews on developmental disorders leading to bovine dystocia, which emphasize that the choice of obstetrical procedure should be based on fetal size, degree of malformation, available obstetrical space and the condition of the dam rather than the congenital anomaly alone (Agerholm *et al.*, 2025) ^[1].

The favourable maternal outcome observed in the present case can be attributed to prompt referral, careful obstetrical manipulation and appropriate postpartum supportive therapy. Early correction of dystocia minimizes the risk of uterine trauma, metritis, retained fetal membranes and subsequent infertility, thereby improving the prognosis for future reproductive performance. Furthermore, recent reports continue to describe Perosomus elumbis as an exceptionally rare congenital anomaly in cattle, with occasional associations with additional visceral defects or intrauterine infections such as bovine viral diarrhoea virus, highlighting the importance of thorough postnatal examination and documentation of individual cases (Sivashankar *et al.*, 2017). The present case adds to the limited literature on successful vaginal management of dystocia caused by Perosomus elumbis in crossbred cattle and supports mutation followed by controlled traction as a practical alternative to caesarean section in carefully selected cases where the fetus is relatively small and the birth canal is adequately dilated.

Conclusion

Perosomus elumbis is a rare congenital fetal anomaly that can cause severe dystocia in cattle. This case demonstrates that timely diagnosis and careful obstetrical manipulation enabled successful vaginal delivery by mutation and controlled traction, avoiding caesarean section. Appropriate postpartum therapy resulted in an uneventful recovery, highlighting that vaginal delivery is a feasible option in selected cases with favourable obstetrical conditions.



Fig.1 Absence of tail and caudal vertebrae



Fig 2: Ankylosed fore limb



Fig.3 Perosomus elumbis fetus

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