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Surgical management of dystocia due to *Perosomus elumbis* in a nondescript buffalo

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Abstract

Perosomus elumbis (Acaudatus) is an occasionally found congenital anomaly characterized by partial or complete agenesis of lumbar, sacral and coccygeal vertebrae and ankylosis of the hind limbs. A full term pregnant, non-descript buffalo of age 7 years old in 3rd parity was presented to the DVCC, College of Veterinary Science, Proddatur with a complaint of parturition signs started before 24 hrs, water bags were also ruptured and foetal limbs were protruded through the vagina but failed to deliver the fetus. On clinical examination animal was dull and depressed. On per-vaginal examination cervix was fully dilated, foetus was in posterior longitudinal presentation and dorso left iliac position and three foetal limbs were in the birth canal (both the hind limbs and one fore limb). Since per-vaginal delivery was not possible caesarean section was performed as per the standard protocol. Animal treated with NSAID and antibiotics for four days. Animal had an uneventful recovery.

Keywords: Buffalo, caesarean section, *Perosomus elumbis*

Introduction

Fetal monstrosities and anomalies involve malformation of fetus and are common causes of dystocia in cattle and buffalo [1]. Monstrosities are more common in buffalo [2] than cattle [3], [4]. Fetal anomalies such as schistosoma reflexes [5], *Perosomus elumbis*, and *Perosomus horridus* [6], conjoined monsters, amorphous Globus's and cyclopean have been recorded in domestic animals [7], however, *Perosomus elumbis* has been reported in ruminants and swine [8]. *Perosomus elumbis* is an occasionally found congenital anomaly of unknown origin. It is characterized by partial or complete agenesis of lumbar, sacral and coccygeal vertebrae and ankylosed of the hind limbs [9]. Because of the complexity of the mechanisms resulting in the development of an anomaly, the precise causative agent of most congenital malformations is unknown [10].

Case history and clinical signs

A seven years old full term non-descript buffalo in its third parity was with a complaint of dystocia to the Department of veterinary clinical complex, College of veterinary science Proddatur, parturition signs before 24 hrs., water bags were also ruptured and fetal limbs were protruded through the vagina but failed to deliver the fetus. On clinical examination, animal was dull and depressed and all vital parameters were within the normal physiological range. Paravaginal examination revealed fetus in posterior longitudinal presentation and dorso iliac position and three fetal limbs were in the birth canal (both the hind limbs and one fore limb) with ankylosed. The birth passage was narrow so per vaginal delivery attempts were futile.

Surgical Treatment: The female calf was relieved through caesarean section under local infiltration of anesthetic using standard procedures. The operative site was prepared by shaving and scrubbing and local infiltration anesthesia is infused at operative site using 60-80 ml of 2% lignocaine. The skin was incised and separated from the subcutaneous layer. The muscles were then incised taking care to avoid major vessels. After separation of muscles by blunt dissection the peritoneum which is white glistening layer was cut. The mental fat covers the uterus which was then incised the uterus was located and brought to the operative site. The uterus was packed on the sides by surgical drapes. Then uterus was incised over the greater curvature avoiding the cotyledons. Then fetus was removed and margin of uterus were washed with sterile normal saline. The placenta was all so removed. The uterus was sutured using Absorbable suture material (Catgut no. 2) employing lambert Cushing suture pattern.

After uterus suturing gloves were changed to minimize abdominal contamination. Then uterus was replaced back in the abdomen after thorough washing. The contaminants that entered in the peritoneum were removed by infusing the peritoneal cavity with normal saline and scooping out the contents manually. Before final closure placement of antibiotic peccaries inside the uterus was done in all the cases. The muscles and peritoneal layers were sutured using catgut no. 2 in continuous pattern. The skin was sutured in simple interrupted pattern using silk no. 2. A sterile drape was applied over the suture line and protected by applying a cloth over the abdomen. Animal was treated post operatively with Inj. Calcium borogluconate 300 ml (slow) IV, Inj. Malone 10 ml IM and Inj. Ceftriaxone 3 gram IV. While conduction detailed examination of the abnormal fetus an imperfectly formed fetus weighing about 8 kg. The fetus had ankylosed fore limbs and kind limbs along with agenesis of lumbar, sacral, coccygeal vertebrae, strongly ankylosed and flexed limbs and Brachygnathia of lower mandible. As per the characteristic features, the fetus was diagnosed as Perosomus elumbis. (Fig.1)



Fig 1: Perosomus elumbis fetal monster



Fig 2: X-Ray showing deformed thoracic, Lumbosacral and pelvic skeleton



Fig 3: Brachygnathia of lower mandible

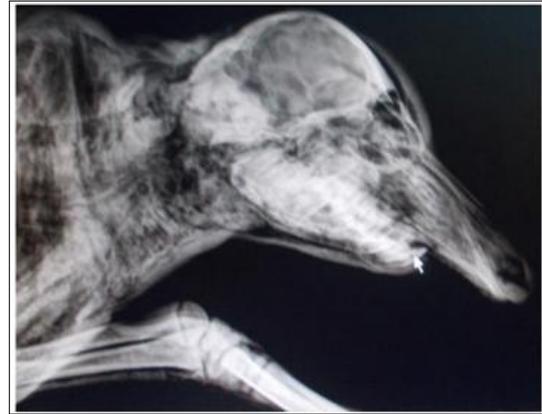


Fig 4: X-Ray showing shortened lower mandible

Perosomus elumbis is occasionally seen in cattle and swine and is characterized by a lack of vertebrae and spinal cord caudal to the thoracic region in the present case (Fig.1). The monster has a small, flattened, deformed pelvis with strongly ankylosed and flexed hind limbs and atrophy of the muscles of the rear quarters [11]. This anomaly which has an unknown etiology was first reported in the veterinary literature in 1832 in a calf and since then many cases have been reported [12]. Palate acts as a bridge between oral and nasal passages and cleft palate is a congenital anomaly which poses a life threatening phenomenon compromising with normal feeding (Fig.3). This may develop during late gestation and may be classified as unilateral, bilateral or medial depending upon the severity of the condition. It is rarely reported in cattle and buffalo than canine and feline [13]. In most of the cases caesarean is the ultimate choice for the management of Perosomus Elumbis [14]. Arthrogyriposis is a genetic deformity due to an autosomal recessive gene with complete penetrance in the homozygous state showing signs of ankylosis of joints, frequently associated with cleft palate, kyphosis and scoliosis [15]. Dystocia caused by fetal ankylosis requires caesarean operation most of time these findings in accordance with [8] and [16] in Holstein calf which was successfully treated by caesarean section.

Conclusion

The present study concluded that Perosomus elumbis was a rare condition leading to most of the cases animal had dystocia necessitating caesarean section.

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