

## Clinical Report

# Perosomus elumbus fetal monster: a rare cause of dystocia in a beetal goat - a case report from Pakistan

Mubbashar Hassan<sup>1</sup>, Sanan Raza<sup>1,\*</sup>, Ahmad Yar Qamar<sup>1</sup>, Muhammad Ilyas Naveed<sup>1</sup>, Abdul Mateen<sup>2</sup>, Muhammad Noman<sup>1</sup>, Sayed Aun Muhammad<sup>2</sup> and Abid Hussain Shahzad<sup>1</sup>

<sup>1</sup>Department of Clinical Sciences, Theriogenology Section, University of Veterinary and Animal Sciences, Sub-campus, Jhang 35200, Pakistan

<sup>2</sup>Department of Clinical Sciences, Surgery Section, University of Veterinary and Animal Sciences, Sub-campus, Jhang 35200, Pakistan

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### \*Correspondence

Sanan Raza  
E-mail: [sanan.raza@uvas.edu.pk](mailto:sanan.raza@uvas.edu.pk)

### Author's Position and Orcid no.

Hassan M, Assistant professor,  
<https://orcid.org/0000-0003-0433-2697>  
Raza S, Lecturer,  
<https://orcid.org/0000-0003-1819-1522>  
Qamar AY, Assistant professor,  
<https://orcid.org/0000-0002-0366-3913>  
Naveed MI, Lecturer,  
<https://orcid.org/0000-0002-9361-6917>  
Mateen A, Lecturer,  
<https://orcid.org/0009-0001-2746-1830>  
Noman M, DVM graduate student,  
<https://orcid.org/0009-0005-6643-4228>  
Muhammad SA, Assistant professor,  
<https://orcid.org/0000-0002-8068-4144>  
Shahzad AH, Assistant professor,  
<https://orcid.org/0000-0002-9442-0000>

**ABSTRACT** Dystocia, a challenging condition in obstetrics, can arise from various causes, including fetal monsters with structural abnormalities. This case report presents a unique case of dystocia due to a fetal monster known as Perosomus Elumbis in a beetal breed goat from Pakistan. The 4-years-old pregnant doe presented with prolonged straining and failure to deliver the fetus after 8 hours of labor. Upon examination, the cervix was dilated, and only the forelimbs of the fetus were visible in the birth canal. The subsequent delivery involved the application of manual traction by using a dystocia kit, and the removal of edematous fluid from the legs. The monster fetus exhibited absence of hair growth, along with the absence of thoracic vertebrae. Two other fetuses were present, with one found dead and the other alive. Post-treatment involved fluid therapy, antibiotics, and supportive care for the doe. This case report sheds light on the occurrence of Perosomus Elumbis fetal monsters and their impact on dystocia in goat breeding. Understanding the underlying causes and implementing appropriate management strategies are crucial for successful outcomes in similar cases.

**Keywords:** birth, dystocia, fetus, goat, monster

## CASE PRESENTATION AND CLINICAL SIGNS

Perosomus Elumbis is an uncommon and intriguing congenital condition in animals, characterized by the underdevelopment of the hindquarters due to the absence of a rigid skeletal support in the lumbosacral region of the back (Kumar et al., 2002). This condition often leads to arthrogryposis in the vertebral column and hind leg

joints, accompanied by underdeveloped musculature in the rear portion of the body. Rahul et al. (2016), Prasad et al. (2017) reported removal of monster fetus with repulsion and correction of posture in a 4-years-old goat at full term pregnancy with distinctive features of under developed musculature and arthrogryposis. The root cause of Perosomus Elumbis can be attributed to the underdevelopment (hypoplasia) or complete absence (aplasia) of

the vertebrae and spinal cord in the lower back beyond the chest region (Suthar et al., 2008). Such a condition can give rise to complications during birth and may affect various anatomical structures or systems, both structurally and functionally. Choi et al. (2015) has reported imaging characteristics of congenital deformity consistent with Perosomus Elumbis in a 4-days-old Poodle dog.

Various studies have suggested that the rudimentary lumbar vertebrae and underdeveloped hindquarter muscles in affected animals result from restricted movement during fetal development. While congenital malformations in goats are rare, cases of Perosomus Elumbis can occur and may result from a combination of genetic alterations and environmental factors (Ravi et al., 2011). The prevalence of this condition varies across different species and breeds of animals. In cattle, it is most commonly observed in Holstein and Brown Swiss breeds, with reported prevalence rates ranging from 0.005% to 0.5%. In sheep, the estimated prevalence is approximately 0.003%. However, Perosomus Elumbis is relatively rare in horses, with only a few reported cases in the literature (Gerhauser et al., 2012). As for goats, although it has been reported in various breeds such as Boer, Alpine, and Nigerian Dwarf goats, its exact prevalence remains poorly documented due to its rarity and variable presentation.

Interestingly, recent reports indicate the occurrence of Perosomus Elumbis cases in local does in India. Reddy et al. (2017) documented cases of fetal monsters (Perosomus Elumbis), while Ravi et al. (2011) reported Perosomus Elumbis cases with hydrocephalus in does in 2011. Additionally, Rahul et al. (2016) reported a Perosomus Elumbis case in a doe in 2016. These localized occurrences highlight the importance of further investigation and understanding of this condition in goats. Given the limited knowledge and documentation of Perosomus Elumbis in goats, this case report aims to contribute to the existing literature by presenting a comprehensive examination and analysis of a Perosomus Elumbis case in a doe. The findings from this study will provide valuable insights into the understanding of this condition in goats and will aid future research and clinical practice in managing and addressing Perosomus Elumbis cases effectively.

## CLINICAL SIGNS

A case of dystocia was observed in a 4-years-old preg-

nant doe of beetal breed, which was presented to the outdoor hospital of University of Veterinary and Animal Sciences, Sub-campus Jhang. The doe had a gestational age of 153 days post mating. The primary complaint was prolonged straining during labor, with no successful delivery of the fetus through the birth canal. The straining had been ongoing for 8 hours prior to presentation. Upon examination, it was observed that the cervix of the doe was open, indicating that the birth process had initiated. However, only the forelimbs of the fetus were protruding from the birth canal, suggesting an anterior longitudinal presentation. This positioning of the fetus can contribute to difficulties during delivery. The clinical signs exhibited by the doe were indicative of distress and exhaustion. The doe appeared dull and depressed, likely due to the prolonged and unsuccessful straining. Additionally, the doe's body temperature was measured to be 102.5°F, which could be an indication of physiological stress associated with the prolonged labor. The doe's inability to extract the fetuses despite continuous straining further emphasized the severity of the dystocia and the need for immediate intervention. The presentation of these clinical signs underscored the urgency of providing appropriate medical assistance to ensure the well-being of both the doe and the fetus. In this case report, a detailed examination of the clinical presentation and clinical signs will be provided, focusing on the dystocia and the associated challenges encountered during the delivery process. This analysis aims to contribute to the understanding of dystocia in goats and assist in the development of effective management and treatment strategies for similar cases in the future.

## RESULTS AND DISCUSSION

The presented case report highlights a challenging dystocia scenario in a pregnant doe, necessitating prompt clinical intervention. Various treatment modalities were employed to address the difficult birth process and ensure the well-being of both the doe and the fetuses. Glucose therapy with calcium gluconate was administered to the doe subcutaneously. This treatment approach aims to provide energy support and address any potential metabolic imbalances or hypocalcemia that may have been contributing to the doe's fatigue and decreased strength during labor. However, despite this initial intervention,

the doe remained unable to successfully deliver the fetus.

Manual traction was then attempted to assist in removing the fetus, but proved ineffective. Subsequently, a dystocia kit was utilized, and a chain was tightly bound to the fetus's legs to provide traction. This technique is commonly employed in cases of dystocia to facilitate the extraction process. However, due to the fetus's edematous condition, the legs were swollen, making it difficult to apply sufficient traction. To overcome this obstacle, the surgical blade was used to remove the edematous fluid from the legs, allowing for better maneuverability and traction. With these adjustments, the legs were successfully delivered. Next, the head of the fetus was squeezed in the birth canal to apply traction, resulting in the partial delivery of the fetus. The fetus exhibited characteristics consistent with a monster fetus, as it lacked hair growth on the skin and displayed the absence of cervical and thoracic vertebrae (Fig. 1). These abnormalities suggest severe developmental malformations, likely contributing to the difficult birth process. The extraction of the second fetus was successful but it expired, potentially due to aspiration or suffocation within the birth canal. Dystocia and prolonged labor can lead to fetal distress and compromise, increasing the risk of perinatal mortality. Fortunately, the third fetus was successfully delivered and found to be alive, providing a positive outcome amidst the challenging circumstances. The survival of this fetus indicates the importance of timely and appropriate interventions in cases of dystocia. This case report highlights the complexity and criticality of managing dystocia cases in



**Fig. 1.** Aberrant features of the monster fetus - absence of hair growth and cervical & thoracic vertebrae.

goats. It emphasizes the significance of prompt veterinary intervention, including the administration of supportive therapies and the utilization of appropriate techniques such as manual traction and dystocia kits. Additionally, the occurrence of a monster fetus and the subsequent perinatal mortality serve as reminders of the potential complications and risks associated with dystocia. Further research and investigation are warranted to understand the underlying causes and contributing factors associated with difficult births in goats, as well as to develop effective preventive and management strategies to mitigate these challenges.

The presented case report describes a difficult birth scenario in a goat, resulting in the delivery of a monster fetus diagnosed as *Perosomus Elumbis*. Gross examination of the monster fetus revealed notable characteristics, including the absence of hair growth on the skin and the absence of thoracic and cervical vertebrae. The weight of the monster fetus was approximately 8 kg, and its length was greater than the other two fetuses, measuring approximately 65 cm, while the other fetuses measured around 55 cm. Additionally, two out of the three fetuses exhibited slight swelling of the thymus glands. Post-treatment of the doe involved fluid therapy with ringer lactate administered intravenously, as well as the administration of Amvicom (1.5 mL/5 kg dose, selmore agencies) and calcium gluconate subcutaneously. Intra-vaginal application of Penbiotic 5 g (2.5 mL/10 kg, Nawan) and a five-day course of intramuscular penicillin were also implemented. As a result of the treatment, the doe survived, and the third fetus was successfully recovered. The incidence of fetal monsters in livestock holds significant importance due to genetic transmission of malformations and their economic implications. Dystocia due to *Perosomus Elumbis* in zebu cattle (Sharma et al., 2017), in Holstein cattle (Eslami et al., 2014), in Murrah Buffalo (Prasad et al., 2017) and in Nili Ravi buffalo (Mehmood et al., 2014) have already been reported. These malformations represent approximately 1% of all congenital conditions in caprine and bovine species (Roberts, 1971). The present case aligns with the description of *Perosomus Elumbis* as outlined by Roberts (1971), with the monster fetus exhibiting the expected malformations. Furthermore, iodine deficiency in the area is noted as a constant problem in caprine and bovines, potentially contributing to these types of malformations.

## CONCLUSION

This case highlights the complex nature of fetal monsters, which can result from a combination of nutritional and congenital abnormalities, such as *Perosomus elumbis*. In the context of dystocia, both the monster face and goiter due to iodine deficiency may have contributed to the occurrence of this difficult birth. The presence of goiter was also noted in the deceased fetus, although the swelling of the thyroid glands was relatively less pronounced compared to the monster fetus. Understanding the factors contributing to the development of fetal monsters, including genetic and nutritional influences, is crucial for effective management and prevention. Strategies aimed at addressing nutritional deficiencies, such as iodine supplementation, may play a role in reducing the incidence of such malformations. Continued research and investigation are warranted to further elucidate the underlying mechanisms and develop targeted interventions to mitigate the occurrence of fetal monsters and associated dystocia in livestock populations.

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## REFERENCES

- Choi S, Lee B, Lee B, Seo J, Park H, Kwon K, Lee Y, Choi H. 2015. Imaging characteristics of *Perosomus elumbis* in a puppy. *J. Emb. Trans.* 30:341-344.
- Eslami M, Gharagozloo F, Rahimi Feyli P, Vojgani M, Soroori S. 2014. A case of perosomus elumbis concurrent with visceral abnormalities in a Holstein calf. *Iran. J. Vet. Med.* 8:143-145.
- Gerhauer I, Geburek F, Wohlsein P. 2012. *Perosomus elumbis*, cerebral aplasia, and spina bifida in an aborted thoroughbred foal. *Res. Vet. Sci.* 92:266-268.
- Kumar SS, Vel KS, Kannan TP, Gajendran K. 2002. A rare case of perosomus elumbis in a tellicherry goat. *Indian J. Anim. Reprod.* 23:88.
- Mehmood MU, Qamar A, Raza S, Khan H, Shahzad Q, Sattar A. 2014. Dystocia due to perosomus elumbis (*Acaudatus*) in a buffalo. *Pak. J. Zool.* 46:1468-1470.
- Prasad BC, Manda S, Rao KS. 2017. Dystocia due to perosomus elumbis in a graded Murraha buffalo. *North-East Vet.* 17:26-27.
- Rahul K, Sacchan SSD, Rupali R, Nitin P. 2016. Dystocia in a goat due to *Perosomus elumbis* - a case report. *Indian Vet. J.* 93:63-64.
- Ravi P, Ramesh GSV, Karunanithi K, Chinnamani C, Bandeeswaran C, Arulnathan N. 2011. Thoracomelia, perosomus elumbis and hydrancephaly in a kid - a case report. *Indian J. Field Vet.* 7:67-68.
- Reddy NVK, Yashaswini K, Raju G, Reddy KR. 2017. *Perosomus elumbis* monster and mummified fetus causing dystocia of a normal fetus in a Mahabubnagar local doe. *Haryana Vet.* 56: 234-235.
- Roberts SJ. 1971. *Veterinary Obstetrics and Genital Diseases*. 2nd ed, CBS Publishers and Distributors, Delhi, pp. 70-71.
- Sharma A, Sharma A, Neelam, Singh M, Kumar P. 2017. Dystocia in zebu cattle due to *Perosomus elumbis* - a case report. *Explor. Anim. Med. Res.* 7:104-105.
- Suthar VS, Parmar AP, Panchal MT, Shah RG, Kavani FS. 2008. DYSTOCIA due to *Perosomus elumbis* in a goat. *Indian J. Anim. Reprod.* 29:119-120.