

Management of Post- Partum Uterine Prolapse in a 4 – Year - Old Uda Cross Breed Ewe

Maryam B. D.^{1*}, Felix, U.², Rashida, M. A.², Kabir, I.³, Imar, B. I.⁴ and Mahuta, M. M.⁵

¹Department of Theriogenology and Animal Production, Faculty of Veterinary Medicine, Bayero University Kano, Nigeria.

²Department of Theriogenology, Faculty of Veterinary Medicine, Ahmadu Bello University, Zaria, Nigeria.

³Veterinary Unit, Department of Agriculture and Natural Resources, Katsina Local Government Area, Katsina State, Nigeria.

⁴Bayero University Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Bayero University Kano, Nigeria.

⁵Department of Theriogenology and Animal Production, Faculty of Veterinary Medicine, Federal University of Agriculture Zuru, Birnin Kebbi, Nigeria.

Corresponding Author Email: maryambdarma01@gmail.com

Received 30 August, Accepted 5 October 2026, Published 14 October 2026

Direct Research Journal of Veterinary Medicine and Animal Science



Vol. 11(1), Pp. 85-88, October 2026

Author(s) retains the copyright of this article

This article is published under the terms of the Creative Commons Attribution License 4.0.

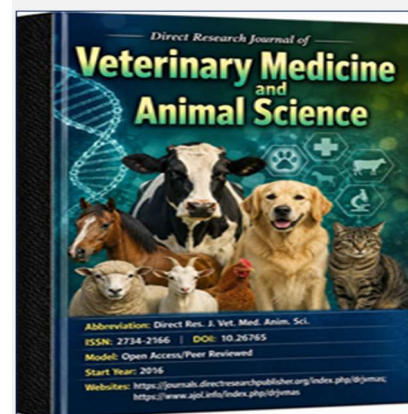
<https://journals.directresearchpublisher.org/index.php/drjafs>; <https://www.ajol.info/index.php/drjafs>

Case Report
ISSN: 4372-2601

ABSTRACT

A four-year-old crossbred Uda ewe weighing 40 kg was presented to the Veterinary Teaching Hospital, Bayero University, with a uterine mass protruding through the vulva following unattended parturition. The history revealed prolonged straining, although the lamb was delivered alive and active. Clinical examination revealed a dark red to purple, cylindrical uterine mass measuring approximately 20–30 cm, with visible caruncles. Laboratory findings indicated reduced packed cell volume (29%), haemoglobin concentration (8.9 g/dL), and serum calcium concentration (1.9 mmol/L), alongside an elevated white blood cell count ($12.7 \times 10^9/L$). Management involved thorough cleaning of the prolapsed uterus, application of sugar granules to reduce swelling, rinsing with normal saline, and disinfection with diluted chlorhexidine. Caudal epidural anaesthesia was achieved using 2% lignocaine hydrochloride to facilitate uterine replacement and prevent straining. Following manual replacement, a vulvar purse-string suture was applied to prevent recurrence. Supportive treatment included calcium borogluconate, oxytocin, oxytetracycline, iron dextran, and multivitamins. The ewe showed progressive improvement in vital parameters, and the suture was removed on the fifth day, with the uterus remaining in its normal anatomical position. No complications, including metritis or endometritis, were observed. This case demonstrates the importance of prompt clinical intervention, appropriate anaesthesia, careful uterine replacement, and supportive therapy in the successful management of postpartum uterine prolapse in ewes.

Keywords: Uterine prolapse, Uda ewe, postpartum complication, epidural anaesthesia, uterine replacement, supportive therapy



Citation: Maryam B. D., Felix, U., Rashida, M. A., Kabir, I., Imar, B. I. & Mahuta, M. M. (2026). Management of Post- Partum Uterine Prolapse in a 4 – Year - Old Uda Cross Breed Ewe. *Direct Research Journal of Veterinary Medicine and Animal Science*. Vol. 11(1), Pp. 85-88. <https://doi.org/10.4314/drjvmas.v11i1.7>

INTRODUCTION

Uterine prolapse is the protrusion of the uterus through the vulva and is an obstetric emergency. It normally occurs in the third stage of labour or within hours of parturition, when the cervix is still open and the uterus lacks tone (Noakes *et al.*, 2001; Hanie, 2006). It is most common in cattle and

sheep and less common in goats. Its cause is not fully understood, but several factors have been associated with it, including prolonged straining, dystocia, and hypocalcaemia (Jackson, 2004; Noakes *et al.*, 2019). Periparturient mineral disturbances are common in ewes in

late pregnancy and early lactation, particularly when feed is poor or the ewe carries multiple lambs (Brozos *et al.*, 2011; Constable *et al.*, 2017). Hypocalcaemia reduces myometrial tone and delays cervical involution (Roberts, 2004). Hypocalcaemia and hypophosphataemia have been linked to dystocia, retained fetal membranes (Roche, 2006) and uterine prolapse (Pandey *et al.*, 2007), and low calcium has been reported in many affected animals (Fubini and Ducharme, 2006; Tahir, 2014). The condition occurs sporadically after apparently normal lambings and is usually reported in younger ewes. Its incidence is about 0.5% but may reach 20% in some flocks (Aitken, 2007). Prognosis is generally good when treatment is prompt and the tissue is intact. Delay, trauma and secondary infection worsen it, and affected ewes are at risk of metritis and reduced fertility (Noakes *et al.*, 2019). Ewes that prolapse once may do so again, so culling or close monitoring should be considered (Tahir, 2014). Reports on uterine prolapse in the Uda breed and its crosses in northern Nigeria, with accompanying haematological and calcium data, are scarce. This report describes the clinical findings, laboratory results and field management of post-partum uterine prolapse in a four-year-old Uda cross-breed ewe under semi-intensive management.

Case Presentation

Case History

A Client reports an ewe weighing 40Kg to the large animal clinic of Bayero University Veterinary Teaching Hospital with the chief complaint of mass protrusion from the vulva after giving birth unattended to overnight. There was no history of assisted delivery reported, but prolonged straining had occurred. The lamb delivered was alive and active. It was semi- intensively managed with 4 other ewes, fed on beans husk and groundnut leaves.

Laboratory examination

Blood sample from the ewe was collected via the jugular vein into plain and EDTA containers before the treatment begins.

Clinical manifestation

Ewe was standing alert and restless due to straining. On clinical examination of the vulva region, there was a large dark red to purple cylindrical mass protruding (20-30 cm length) from the vulva. The mass was identified as uterus with caruncles being visible on the surface (Plate I and Table 1). The ocular mucus membrane was slightly pale. The vital parameters were 38.6°C, 110 beat/ min and 37 cycles/min for temperature, Pulse, and respiratory rate respectively.



Plate I: On day of presentation of the ewe; the uterus (Blue arrow) and caruncles (white arrow)

Table 1: Haematology and Serum Biochemistry of the ewe

Parameter	Value obtained	Reference range
PCV (%)	29	30.2 – 32.5
Hb (g/dl)	8.9	10.3 - 11.8
White Cell Count ($\times 10^9/L$)	12.7	8.7 - 11.2
Neutrophils (%)	45	33.4 - 36.3
Calcium (mmol/L)	1.9	2.0 - 2.8

Source: Recree, (2009)

Management

The uterine mass was washed reduced with sugar granules applied to the surface of the uterus and rinse thoroughly with normal saline and disinfected with diluted chlorhexidine®. Epidural anesthesia was achieved by infiltration of 2% Lignocaine hydrochloride solution (1.5 ml) into first intercoccygeal vertebral space to prevent straining during replacement. The placenta was manually separated from the maternal caruncles after five minutes of anaesthetic administration. The prolapsed uterus was gently replaced to its anatomical position using both hands with slight force while the ewe was on standing position. A purse string suture was placed at the vulva after replacement to prevent reoccurrence.



Plate II A: Washing and disinfection of the mass; Plate II B: The prolapsed uterus was gently replaced to its anatomical position

The following medications were administered after the replacement: Inj. 25% Calcium borogluconate 40 ml x $\frac{2}{7}$ I.V; Inj. Oxytocin 10 I.U x $\frac{1}{7}$ I.m.; Inj. 20 % Oxytetracycline 20 mg / kg x $\frac{1}{7}$ I.m; Inj. Iron Dextran 3 ml x $\frac{3}{7}$ I.m; Inj. Multivitamin 1 ml / 10 kg x $\frac{3}{7}$ I.m. On day 2, rectal temperature was 38.4 °C, pulse rate 100 beats/min and respiratory rate 35 cycles/min. On day 3, rectal temperature was 38.2 °C, pulse rate 97 beats/min and respiratory rate 32 cycles/min. The suture was removed on the day five and the uterus was intact in its anatomical position (Plate IIA AND IIB). There was no any complication such as retained fetal membranes, metritis, or endometritis noticed.

RESULTS AND DISCUSSION

Uterine prolapse is an obstetric emergency in sheep, and prompt treatment is needed to preserve the life and future reproductive potential of the animal. In this case, the ewe lambd unattended and strained for a prolonged period before presentation. Both are recognised risk factors for prolapse, alongside hypocalcaemia (Noakes *et al.*, 2019; Radostits *et al.*, 2007). Rectal temperature was within the normal range for sheep, but pulse and respiratory rates were above reference values (Radostits *et al.*, 2007). This is consistent with pain, exertion and stress, and anaemia which may have contributed. The pale mucous membranes were accompanied by a low-normal PCV and a slightly low haemoglobin, so the anaemia was mild. Blood loss at parturition and from the traumatised, exposed uterine mucosa may have contributed (Noakes *et al.*, 2019), as may poor nutrition (Radostits *et al.*, 2007).

Lower haematocrit and haemoglobin values have also been reported in Nigerian sheep (Oduye, 1976), so part of this finding may reflect breed and environment. The total leukocyte count was mildly raised and neutrophils were above the reference range. This is consistent with an inflammatory response to tissue trauma, exposure and possible bacterial contamination of the prolapsed uterus, and with the stress of parturition and handling (Jain, 1993; Kaneko *et al.*, 2008). Leukocyte counts in tropical sheep breeds are also reported to be higher than in temperate breeds (Oduye, 1976; Saror and Schillhorn van Veen, 1977), so part of the elevation may be physiological. Even so, the finding supported antibiotic cover, since the exposed endometrium is prone to infection and subsequent metritis (Noakes *et al.*, 2019). Serum calcium was only marginally below the reference range, but it was clinically relevant. Low calcium reduces smooth muscle tone and uterine contractility, and hypocalcaemia has been associated with uterine prolapse in ewes, which typically occurs in late gestation or within hours of lambing (Radostits *et al.*, 2007; Noakes *et al.*, 2019; Tahir, 2014). Calcium demand for fetal growth and the onset of lactation can exceed intake and mobilisation, especially when diets are poor. The ewe was fed beans husk and groundnut leaves, and the quality of this diet in late gestation may have contributed (Radostits and Henderson, 2017). Calcium homeostasis is also linked to magnesium, phosphorus and albumin concentrations (Kaneko *et al.*, 2008), none of which were measured. Blood was collected after prolonged straining, so stress and exertion may have influenced the results. The calcium value should therefore be considered an association, not proof that hypocalcaemia caused the prolapse.

The ewe was four years old, which is older than the usual age at which prolapse is reported. Younger ewes described a tendency, not a rule, so one case at this age does not contradict the literature.

The exposed uterus was cleaned with normal saline and diluted chlorhexidine®. The surface of the mass tissues was coated with sugar, a common field practice for reducing oedema through osmotic action. Epidural anaesthesia suppressed straining, which allowed the placenta to be separated from the caruncles and the uterus to be replaced manually with the ewe on standing position. A purse-string suture was applied at the vulva and is widely used to prevent recurrence while uterine tone recovers (Noakes *et al.*, 2019). Oxytocin was given to promote uterine contraction and involution, and calcium borogluconate to correct the hypocalcaemia and support uterine tone. Oxytetracycline provided broad-spectrum cover against infection, and iron dextran and multivitamins were given to support recovery from anaemia and improve general condition.

The temperature, pulse and respiratory rates fell progressively over three days. This improvement probably reflects the combined effect of replacement, analgesia, relief of straining, calcium therapy and antibiotic. The suture removal on day 5, and the uterus remaining in position, with no retained fetal membranes, metritis or endometritis observed during this period, is a sign of successful handling of this case.

In conclusion, immediate cleansing, epidural anaesthesia, manual replacement, vulval retention and supportive therapy were used to manage post-partum uterine prolapse with a favourable short-term outcome. Mild anaemia, an inflammatory leukogram and mild hypocalcaemia were associated with the condition. Early presentation, assisted lambing where needed and balanced mineral nutrition in late gestation are recommended to reduce the risk of uterine prolapse. Uniqueness of this case report is that, few reports have been published on the Uda breed crosses in northern Nigeria, and most of them have no both haematology and calcium results in this setting.

The calcium, leukocytosis and the neutrophilia give an objective link between hypocalcaemia and prolapse, rather than relying on clinical impression. Finally, a 4-year-old ewe is older than a typical prolapse patient.

Limitations: Iron, phosphorus, magnesium and albumin were not measured, no culture and sensitivity testing done.

REFERENCES

- Aitken, I.D., (2007). *Diseases of Sheep*. 4th ed. Blackwell Publishing p. 94-98
- Brozos, C., Mavrogianni, V.S., and Fthenakis, G.C. (2011). Treatment and control of peri-parturient metabolic diseases: pregnancy toxemia, hypocalcaemia, hypomagnesaemia. *Veterinary Clinics of North America: Food Animal Practice*, **27**(1): 105–113.
- Constable, P.D., Hinchcliff, K.W., Done, S.H. and Grünberg, W. (2017). *Veterinary Medicine: A Textbook of the Diseases of Cattle, Horses, Sheep, Pigs and Goats*, 11th ed. Elsevier.
- Fubini, S.L. and Ducharme, G.N. (2006). Surgical Conditions of the Post-Partum Period. *Text Book of Farm Animal Surgery*, Saunders, Elsevier, St. Louis, MO, USA. pp: 333-338.
- Hanie, E.A. (2006). Prolapse of the Vaginal and Uterus: *Text Book of Large Animal Clinical Procedures for Veterinary Technicians*. Elsevier, Mosby, pp: 218-221.
- Jackson, P.G.G. (2004). Post parturient Problems in Large Animals. *Hand Book of Veterinary Obstetrics*. 2nd Ed. Elsevier Saunders, pp: 209-231.
- Jain, N. C. (1993). *Essentials of Veterinary Haematology*. Lea and Febiger.
- Kaneko, J. J., Harvey, J. W., and Bruss, M. L. (2008). *Clinical Biochemistry of Domestic Animals* (6th ed.). Academic Press.
- Noakes, D. E., Parkinson, T. J., and England, G. C. W. (2019). *Arthur's veterinary reproduction and obstetrics* (10th ed.). Elsevier.
- Noakes, D.E.; Parkinson, T.J. and England, G.C.W. (2001). Post Parturient Prolapse of the Uterus. *Arthur's Veterinary Reproduction and Obstetrics*. Saunders, pp: 333-338.
- Oduye, O. O. (1976). Haematological values of Nigerian goats and sheep. *Tropical Animal Health and Production*, **8**(3), 131–136.
- Pandey, A.K., Shukla, S.P., and Nema, S.P. (2007). Certain haematobiochemical alterations during post-partum uterine prolapse in buffaloes (*Bubalus bubalis*). *Buffalo Bull*. **26**(1): 20-22.
- Radostits, B.D.C., and Henderson, J.A. (2017). *Veterinary medicine A text book of the diseases of Cattle, Horses, Sheep, Pigs and Goats*. 11th ed the English book Society and Baillier Tindall, Ltd., London, pp.1015 – 1080.
- Radostits, O. M., Gay, C. C., Hinchcliff, K. W., and Constable, P. D. (2007). *Veterinary medicine: A textbook of the diseases of cattle, horses, sheep, pigs and goats* (10th ed.). Saunders Elsevier.
- Reece, W. O. (2009). *Functional Anatomy and Physiology of Domestic Animals* (4th ed.). Wiley-Blackwell. 1-577.
- Roberts, S. J. (2004). Injuries and diseases of the puerperal period. In: *Veterinary Obstetrics and Genital Diseases (Theriogenology)*. 2nd ed. CBS Publishers and Distributors, New Delhi, India, Pp 300-335.
- Roche, J.F. (2006). The effect of nutritional management of the dairy cow on reproductive efficiency. *Animal Reproduction Science*. **96**(3-4): 282-296.
- Saror, D. I., and Schillhorn van Veen, T. W. (1977). Haematological values of Uda and Yankasa sheep in the northern Guinea savanna of Nigeria. *Tropical Animal Health and Production*, **9**(4): 245-248.
- Tahir, A.F. (2014). Postpartum uterine prolapse and its relation to hypocalcaemia in local ewes in Basrah province. *The Iraqi Journal of Veterinary Medicine*, **38**(1):71-73.