



E-ISSN: 2320-7078

P-ISSN: 2349-6800

[www.entomoljournal.com](http://www.entomoljournal.com)

JEZS 2021; 9(2): 1341-1342

© 2021 JEZS

Received: 15-01-2021

Accepted: 19-02-2021

**Atul K Verma**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Ashutosh Tripathi**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Akhil Patel**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Manish K Shukla**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Jeny K John**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Vijay Singh**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Shambhavi**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Aman Srivastava**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Harshit Saroha**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

**Corresponding Author:****Atul K Verma**

Department of Veterinary Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut, Uttar Pradesh, India

## Management of fetal mummification in a cow

**Atul K Verma, Ashutosh Tripathi, Akhil Patel, Manish K Shukla, Jeny K John, Vijay Singh, Shambhavi, Aman Srivastava and Harshit Saroha**

**Abstract**

Fetal mummification is a late gestational problem in bovines with incidence rate of less than 2%. A three and half year old Jersey cow was presented to Veterinary Clinical Complex, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut with the history of prolonged gestation period. No sign of parturition was displayed by the cow even after completion of duration of normal gestation period. Per-rectal examination of the cow revealed presence of a mummified fetus in the uterus. The mummified fetus was delivered by laparohysterotomy after attempts to dilate cervix and deliver the fetus with PGF<sub>2α</sub> and diethylstilbestrol therapy failed. Animal was given post-operative fluid, antibiotics and other supportive therapy for 7 days and was discharged following uneventful recovery.

**Keywords:** fetal mummification, PGF<sub>2α</sub>, diethylstilbestrol, laparohysterotomy

**Introduction**

Mummified fetus is a reproductive disorder which leads to fetal loss and extended gestation. It is responsible for economic losses to the farmers. Mummification is the condition of late sterile embryonic death (mostly between 3<sup>rd</sup> to 8<sup>th</sup> month of gestation) where corpus luteum persists and cervix remains completely closed [1, 2, 3]. In cattle, fetal fluid gets reabsorbed and the fetus is surrounded by a viscous chocolate color material [4]. Fetal mummification occurs after placenta formation and ossification [1] in both exotic and indigenous cattle [5] wherein the fetus remains in the uterus even after completion of gestation period [6]. In cases of fetal mummification there is an absence of initiation of parturition signal which may be due to dead fetus. This condition generally requires therapeutic or surgical intervention. In cattle the incidence of mummified fetus is low and may range from 0.13-1.8% [7]. Considering the rare and sporadic nature of incidence the present case is placed on records.

**Case history and clinical findings**

A Jersey cow of around 3.5 years age in her second parity was presented to Veterinary Clinical Complex, College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut. Owner reported that animal was not showing any sign of parturition even after completion of gestation period. Animal was in good body condition and all clinical parameters were normal. Per-rectal examination revealed fetus to be in mummified condition. Vaginal examination revealed tightly closed cervix with presence of cervical mucus plus.

**Materials and Method**

Animal was administered single injections of 500 µg cloprostinol sodium single dose and 50 mg diethylstilbestrol by intra muscular route for two days. This therapeutic regime could not produce cervical dilation. Many researchers have reported that up to 60 % cases of mummified fetus can be expelled out using alone PGF<sub>2α</sub> [8] while some have suggested for use of estrogen [9]. This regime was used in case under report but probably due to delay in presentation of the case to VCC, it could not dilate cervix and per vaginal delivery of the mummified fetus was not accomplished. The success of therapeutic regime depends on several factors like delay in presentation, fluid present in the birth canal etc. Laparohysterotomy was performed by left flank incision under inverted 'L' block and local infiltration of 2% lignocaine hydrochloride to deliver the mummified fetus (fig. 1). The same has been recommended in case of failure of therapeutic regime by many veterinarians in the past [10, 11].

After cesarean section, postoperative therapy was given for seven days including intravenous fluids, antibiotics, anti-inflammatory, anti-histaminics, hepatobiliary drugs and daily antiseptic dressing for 7 days. Though the administration of antibiotics is not required without the symptoms like pyrexia, toxaemia and infection<sup>[12]</sup> but the same was done to prevent complications due to secondary bacterial infections which might have been acquired during surgery and post-operative period. The animal was monitored for 7 days in the hospital and was observed to have uneventful recovery. Seven days postoperative animal was discharged with an advice to follow up for removal of skin sutures after one week.



**Fig 1:** Mummified fetus delivered by laparohysterotomy

### Result and Discussion

The patient was revisited after one month of surgery and was observed to have fully recovered. The case was re-approached after 6 months and was discovered as pregnant again. Thus this case resembles to some veterinarians report that cesarean section in dairy cattle did not change the interval to first service or subsequent gestation length<sup>[13]</sup>. It is reported that overall pregnancy rate in dairy and beef cows that had cesarean sections has shown to be 72% and 91%<sup>[14]</sup>. Also there was no significant loss in production of cattle. This result suggests that cesarean section is a preferred technique for treatment of mummification in cattle if it fails to respond to therapeutic treatment.

### Conclusion

Fetal mummification is a rare condition of bovines. The present case of mummification was managed with corrective surgical interventions and therapeutic measures which were effective and resulted in uneventful recovery of the animal.

### Acknowledgement

The authors gratefully acknowledge the facilities extended by College of Veterinary and Animal Sciences, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut for extending the necessary facilities.

### References

1. Lefebvre RC. Fetal mummification in the major domestic species: current perspectives on causes and management. *Vet. Med.: Res. Rep* 2015;6:233-244.

2. Noakes DE, Parkinson DJ, England GCW. Abnormalities of development and pregnancy. *Veterinary Reproduction and Obstetrics*, (10<sup>th</sup> Ed.). Saunders Harcourt, India 2019, 193.
3. Jalakas M. Mummification of fetal membranes in the bovine vagina: A case report. *Theriogenology* 2000;54(8):1281-1284. doi:10.1016/s0093-691x(00)00434-9
4. Noakes DE, Parkinson DJ, England GCW. Abnormalities of Development of Conceptus and its consequences. *Veterinary Reproduction and Obstetrics* (9<sup>th</sup> Ed.), Saunders Harcourt 2009, 139.
5. Jana D, Ghosh M. Foetal mummification owing to severe thermal burn in an indigenous cow. *Explor. Anim. Med. Res* 2014;4(1):121-123.
6. Kumar RP, Prasad BC, Bose GSC, Prasad VD, Sreenu M. Diagnosis and management of fetal mummification in cow. *Int. J. Sci. Env. Tech* 2017;6:3044-3048.
7. Barth AD. Induced abortion in cattle. In: *Current therapy in Theriogenology*. (2nd Ed). Philadelphia; W. B. Saunders 1986, 205.
8. Vandeplassche M, Bouters R, Spincemaille J, Bonte P. Induction of parturition in cases of pathological gestation in cattle. *Theriogenology* 1974;1:115-121.
9. Roberts SJ. *Veterinary Obstetrics and Genital Diseases*, 2nd ed. CBS Publishers, New Delhi 1971.
10. Azizunnesa BC, Sutradhar BC, Das MF, Hossain, Faruk MO. A case study on mummified foetus in a heifer. *Univ. J. Zool. Rajshahi. Univ* 2010;28:61-63.
11. Kumar PR, Prasad VD, Prasad BC. An unusual case of mummified foetus in a doe: a case report. *Res and Rev.: J. Vet. Sci. Tech* 2017;6(1):20-21.
12. Katiyar R, Sacchan SSD, Manzoor M, Rautela R, Pandey N, Prasad S *et al.* Haematinic foetal mummification in a Sahiwal cow: Case Report. *J. Livest. Sci* 2015;6:44-46.
13. Barkema H, Schukken Y, Guard C, Brand A, van de Weygen G. Fertility, production and culling following cesarean section in dairy cattle. *Theriogenology* 1992;38:589-99.
14. Cattell JH, Dobson H. A survey of caesarean operations on cattle in general veterinary practice. *Vet Rec* 1990;127:395-9.