PUBLIC HEALTH
OpenJournal

Openventio
PUBLISHERS

Short Communication

A Rare Case of Early Abortion in Indegenous Cattle

Chetna gangwar[1], Brijesh Kumar Yadav[1], Sobhit[2], Pawan Kumar[2], Rakesh Kumawat[2], Anushka Pal[2], Sachham Verma[2]

[1]Department of Veterinary Clinical Complex, India
[2]Department of Veterinary Gynaecology and Obstetrics U.P. Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Vishwavidyalaya Evam Go Anusandhan Sansthan, Mathura-281001, Uttar Pradesh, India

Corresponding Author
Chetna Gangwar
Email: chetnaom@gmail.com

Article Information:
Received: 15 November 2025 | Revised: 17 December 2025 | Accepted: 20 January 2026 | Published: February 25, 2026

Cite this article:
Chetna gangwar, Brijesh Kumar Yadav, Sobhit2, Pawan Kumar, Rakesh Kumawat, Anushka Pal, Sachham Verma (2026). A Rare Case of Early Abortion in Indegenous Cattle. *Public Health Open Journal*. 11(1):109–112.
https://doi.org/10.17140/PHOJ.11.01.109

Abstract
An indigenous non-descript cow, approximately 7.5 years old and in its fourth parity, was presented to the Veterinary Clinical Complex with a history of purulent vaginal discharge of one day's duration. According to the owner, the animal had been bred by artificial insemination approximately two months earlier, with no history of vaginal discharge or reproductive abnormality prior to breeding. Per-vaginal examination revealed the presence of a small aborted fetus lodged within the vaginal canal, and the cervix was found to be dilated to approximately one finger breadth. The crown–rump length (CRL) of the aborted fetus measured approximately 4.5 cm and weighed around 9.0 grams, indicating early gestational loss. A blood sample was collected from the dam and subjected to serological testing for brucellosis, which yielded a negative result. Based on the clinical findings, the cow was treated with appropriate intrauterine and systemic (parenteral) antibiotic therapy.

Keywords: *Abortion, Cattle, Crown -rump length.*

Introduction

Abortion in cattle is a major reproductive disorder with significant economic implications for the livestock industry worldwide. It is defined as the premature expulsion of the fetus between 42 and 260 days of gestation 1. Bovine abortion results in direct economic losses due to reduced calving rates, extended calving intervals, veterinary expenses, and decreased milk production 2. The etiology of abortion in cattle is multifactorial and broadly classified into infectious and non-infectious causes. Important infectious agents implicated in bovine abortion include Brucella abortus, Leptospira spp., Campylobacter spp., Listeria monocytogenes, Salmonella spp., infectious bovine rhinotracheitis virus (IBR), bovine viral diarrhea virus (BVDV), Tritrichomonas foetus, and various fungal organisms causing mycotic abortion 3. Non-infectious causes such as stress, improper insemination or intrauterine infusion, toxic substances, nutritional deficiencies, and genetic factors are also known contributors to pregnancy loss in cattle. In addition, opportunistic bacterial pathogens, including Trueperella (Arcanobacterium) pyogenes, Bacillus spp., Escherichia coli, Histophilus somni, and Pasteurella spp., have been reported to cause sporadic abortions at any stage of gestation 4. Emerging evidence has also documented abortion associated with less commonly reported organisms such as Staphylococcus lugdunensis 5.

CASE HISTORY AND OBSERVATIONS

An indigenous non-descript cow, approximately 7.5 years old and in its fourth parity, was presented to the Veterinary Clinical Complex with a history of purulent vaginal discharge since the previous day. Clinical examination revealed normal rectal temperature (100.4 °F) and respiration rate (18 breaths/min). According to the owner, the animal had conceived through artificial insemination using frozen semen. Per-vaginal examination revealed a small aborted fetus lodged within the vaginal canal, with cervical dilation of approximately one finger breadth. The aborted fetus had a crown–rump length (CRL) of about 4.5 cm and weighed approximately 9.0 g, consistent with early gestational loss.

TREATMENT AND DISCUSSION

Early embryonic and fetal losses in cattle are common yet often underreported reproductive disorders, particularly in indigenous and non-descript animals maintained under field conditions. In the present case, the crown–rump length (4.5 cm) and fetal weight (9.0 g) indicated early gestational loss, likely occurring during

Figure 1. Indigenous cattle with abortion reported at VCC

Figure 2. Early aborted fetus found logged in vagina

the embryonic to early fetal transition period 6. Abortions at this stage frequently go unnoticed unless accompanied by clinical signs such as vaginal discharge, as observed in this cow. The absence of systemic illness, normal rectal temperature, and respiration rate suggested a localized reproductive tract involvement rather than a generalized infectious condition. Serological testing for brucellosis was negative, thereby ruling out one of the most important zoonotic and in-

Figure 3. Early aborted fetus of cattle

Figure 4. Measurement of early aborted fetus

fectious causes of bovine abortion. Although a definitive etiological diagnosis could not be established due to the lack of fetal and uterine culture, opportunistic bacterial infection remains a likely cause. Organisms such as Trueperella pyogenes, Escherichia coli, Bacillus spp., and other environmental contaminants are known to induce sporadic abortions, especially following cervical manipulation or minor uterine trauma 7. The history of artificial insemination, approximately two months prior to presentation, may also be a contributing factor. Improper asepsis during insemination, contamination of semen or AI equipment, or subclinical uterine infection can predispose animals to early pregnancy loss. Previous studies have highlighted that early embryonic mortality is frequently associated with uterine infections, luteal insufficiency, or inflammatory changes within the endometrium, even in the absence of overt systemic signs 5. Prompt removal of retained fetal material followed by intrauterine and systemic antibiotic therapy is crucial in preventing post-abortion complications such as metritis, pyometra, or chronic endometritis, which can adversely affect future fertility. The case was treated with Enrofloxacin @5mg/kg bwt, o.d, I/M for 3 days, C-Flox Tz @60ml, o.d, I/U for 3 consecutive days, and Bolus Tribivet @ 2boli, o.d, orally for 5 days and advised for mineral mixture @50gm/day, o.d, orally for 20 days. The favourable clinical response observed in this case underscores the importance of early diagnosis and timely therapeutic intervention.

Conclusion

Early embryonic and fetal losses in cattle are common yet often underreported reproductive disorders, particularly in indigenous and non-descript animals maintained under field conditions. In the present case, the crown–rump length (4.5 cm) and fetal weight (9.0 g) indicated early gestational loss, likely occurring during the embryonic to early fetal transition period 6. Abortions at this stage frequently go unnoticed unless accompanied by clinical signs such as vaginal discharge, as observed in this cow. The absence of systemic illness, normal rectal temperature, and respiration rate suggested a localized reproductive tract involvement rather than a generalized infectious condition. Serological testing for brucellosis was negative, thereby ruling out one of the most important zoonotic and infectious causes of bovine abortion. Although a definitive etiological diagnosis could not be established due to the lack of fetal and uterine culture, opportunistic bacterial infection remains a likely cause. Organisms such as Trueperella pyogenes, Escherichia coli, Bacillus spp., and other environmental contaminants are known to induce sporadic abortions, especially following cervical manipulation or minor uterine trauma 7. The history of artificial insemination, approximately two months prior to presentation, may also be a contributing factor. Improper asepsis during insemination, contamination of semen or AI equipment, or subclinical uterine infection can predispose animals to early pregnancy loss. Previous studies have highlighted that

early embryonic mortality is frequently associated with uterine infections, luteal insufficiency, or inflammatory changes within the endometrium, even in the absence of overt systemic signs 5. Prompt removal of retained fetal material followed by intrauterine and systemic antibiotic therapy is crucial in preventing post-abortion complications such as metritis, pyometra, or chronic endometritis, which can adversely affect future fertility. The case was treated with Enrofloxacin @5mg/kg bwt, o.d, I/M for 3 days, C-Flox Tz @60ml, o.d, I/U for 3 consecutive days, and Bolus Tribivet @ 2boli, o.d, orally for 5 days and advised for mineral mixture @50gm/day, o.d, orally for 20 days. The favourable clinical response observed in this case underscores the importance of early diagnosis and timely therapeutic intervention.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

References

1. Mee, J. F. (2020). Investigation of bovine abortion and stillbirth/perinatal mortality: Similar diagnostic challenges, different approaches. *Irish Veterinary Journal*, 73, 20. https://doi.org/10.1186/s13620-020-00172-0
2. Keshavarzi, H., Sadeghi-Sefidmazgi, A., Ghorbani, G. R., Kowsar, R., Razmkabir, M., & Amer, P. (2020). Effect of abortion on milk production, health, and reproductive performance of Holstein dairy cattle. *Animal Reproduction Science*, 217, 106458. https://doi.org/10.1016/j.anireprosci.2020.106458
3. Keshavarzi, H., Sadeghi-Sefidmazgi, A., Kristensen, A. R., & Stygar, A. H. (2017). Abortion studies in Iranian dairy herds: I. Risk factors for abortion. *Livestock Science*, 195, 45–52. https://doi.org/10.1016/j.livsci.2016.11.004
4. Holler, L. D. (2012). Ruminant abortion diagnostics. *Veterinary Clinics of North America: Food Animal Practice*, 28, 407–418.
5. Ardigo, P., D'Incau, M., & Pongolini, S. (2014). Abortion in cattle due to infection with *Staphylococcus lugdunensis*. *Journal of Veterinary Diagnostic Investigation*, 26(6), 818–820.
6. Mwangi, S. I., Buckley, F., Ilatsia, E. D., & Berry, D. P. (2025). Gestation length and its associations with calf birth weight, perinatal mortality, and dystocia in dairy cattle. *Journal of Dairy Science*, 108(8), 8685–8696.
7. Ponnusamy, P., Ronald, B. S. M., Ranjith Kumar, M., Ananda Chitra, M., & Manickam, R. (2017). A rare case of bovine abortion due to *Trueperella pyogenes*. *International Journal of Scientific Environmental Technology*, 6(1), 284–287.