



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; SP-10(10): 682-684
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www.thepharmajournal.com
Received: 10-08-2021
Accepted: 12-09-2021

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An unusual case of surgical retrieval of retained AI sheath with straw in a crossbred cow

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Abstract

Artificial insemination is considered to be one of the prime tool to augment milk production in India. However, owing to indiscriminate use of AI by untrained inseminators and quacks at village level in cows causing serious injuries to the reproductive tract. Such injuries are often leads to reproductive culling and incur severe loss in the dairy herds. In this case report we have documented a case of retained uterine sheath in the uterus after insemination by the untrained quack and successful surgical management and removal of the sheath by trans-rectal method.

Keywords: reproductive tract, artificial insemination, retained uterine sheath and dairy cow

Introduction

Artificial insemination (AI) is considered to be one of the prime tool for cross breeding program and genetic upgradation of non-descript cows to augment milk production in India. However, apart from natural service, large scale implementation of AI coupled with unhygienic practice has resulted in an increased incidence of uterine infections in the cows and buffaloes (Ganesan *et al.*, 2013). Recently it was observed that untrained quacks and inexperienced inseminators at village level practising AI causing serious damages to the reproductive tract and deteriorating the fertility of the crossbred cows. In this case report, we document a case of retained AI sheath along with the straw was retained in the uterus after insemination of a cow by the untrained quack and successful surgical management and removal of the sheath by trans-rectal method.

Case History and Observations

A Holstein Frisian crossbred cow on its third parity was presented to the Veterinary Gynaecology unit of Veterinary Clinical Complex, VCRI, Tirunelveli, Tamil Nadu with the history of retention of uterine sheath (AI sheath and straw) during AI by a quack 4 weeks back (during last estrum). Clinical examination revealed all the physiological parameters administering 3 ml of 2% lignocaine and the dung was evacuated, rectal mucosal surface was douched with Normal Saline followed by application of cetrimide cream. The uterine sheath along with straw was located and grasped by alleys tissue holding forceps and a small incision was made on the grasped area and the sheath was retrieved (Fig. 4, 5). After removal of retained uterine sheath along with straw, the mucosa was sutured with catgut 1-0 by inversion method of suture. Further the animal was administered with Inj. Enrofloxacin @ 5 mg/kg b.wt, i/m, Inj. Meloxicam @ 0.2 mg/kg b.wt. i/m, Inj. Botropase - 5 ml total dose, i/m. and Bolus Serratiopeptidase one bolus b.i.d. Antibiotics and anti-inflammatory drugs were repeated for next five days. The owner was advised to avoid roughage diet for next five days and to splash cold water during hot periods of the day. The animal had uneventful recovery without any post-operative complications.

Injuries caused by untrained quacks during AI often leads to parametritis and serosal adhesions which severely impedes the reproductive performance of the cows and predisposes the cows for reproductive culling (Azawi *et al.*, 2008) [1]. The present case was assessed for uterine injuries in depth by ultrasonography for change in the echotexture of the tissue and uterine lavage by Foleys catheter to evaluate the ongoing inflammatory processes in individual uterine horns (Ganesan *et al.*, 2020) [3]. The surgical retrieval by trans-rectal approach might lead to fistula and peritonitis, hence care must be taken to ensure the complete closure of incision site without narrowing the rectal passage, withdrawing the roughage diet for five days and

encouraging laxative diets till recovery. Taken together, In this case we have documented the successful retrieval of retained sheath by trans-rectal approach and clinical recovery without much post-operative complication. Approximately after 45 days after the recovery the owner brought the animal

for Artificial insemination, stating that the cow was showing signs of estrus like frequent bellowing, mounting on other animals and transparent vaginal discharge and subsequently the cow was inseminated for two consecutive days till ovulation.

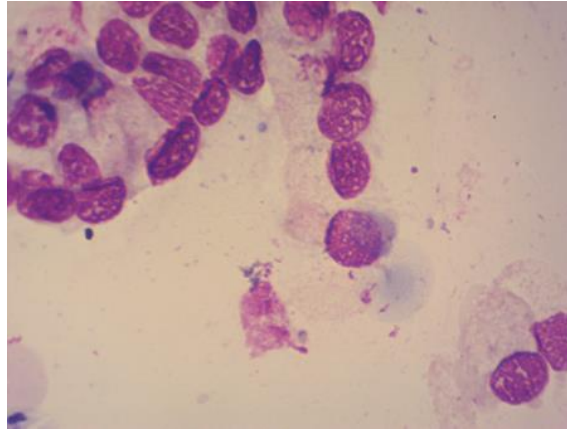


Fig 1: Endometrial epithelial cells in endometrial cytology



Fig 2: Ultrasonographical examination of uterus at cervical end showing normal echotexture



Fig 3: Ultrasonographical examination of uterus at ovarian end showing normal echotexture



Fig 4: Trans rectal approach for surgical retrieval of retained uterine sheath



Fig 5: Retrieved Uterine sheath

Acknowledgement

We thank the Dean, Veterinary College and Research Institute (VCRI), Tirunelveli and the Director of Clinics, TANUVAS for providing necessary facilities for conduct of this case study. We also thank the Associate Professor and Head (i/c) Veterinary Clinical Complex (VCC), VCRI, Tirunelveli, for providing necessary inputs for treating the case.

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