CASE REPORT
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MANAGEMENT OF SECONDARY UTERINE INERTIA IN A RABBIT DOE (*Oryctolagus cuniculus*)

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ABSTRACT

A two-year-old rabbit doe was presented with the history of vigorous straining for the last few hours and eventually become dull, anorectic and laterally recumbent following kindling of three kits fourteen hours prior to presentation. Abdominal palpation revealed presence of two more foetuses. Based on the anamnesis and the clinical findings, the case was diagnosed as secondary uterine inertia and subsequently, one kit was delivered via trans-abdominal manipulation. Due to the non-availability of appropriately sized instrument, the second foetus was delivered on medical management with the parenteral administration of oxytocin and calcium. The doe recovered uneventfully within a week.

Keywords: Assisted delivery, Oxytocin, Rabbit, Secondary uterine inertia

INTRODUCTION

Dystocia is an emergency clinical condition in animals and any negligence may lead to life threatening condition to both the dam and the foetuses (Gruaz *et al*., 2017; Sarkar *et al*., 2017). The incidence of dystocia is uncommon in rabbit as normal delivery is prompt due to the typically small sized foetuses during parturition (Quesenberry and Carpenter, 2004). The causes of dystocia are multifactorial and include involvement of both foetal and/or maternal causes (Ahmed *et al*., 2021). This communication describes the successful management of secondary uterine inertia in a rabbit doe (*Oryctolagus cuniculus*).

CASE HISTORY AND OBSERVATIONS

A two-year-old doe was presented at the Veterinary Ambulatory Clinics of Lakhimpur College of Veterinary Science, Assam Agricultural University, Joyhing, North Lakhimpur, Assam, India. The anamnesis revealed kindling of three kits fourteen hours before reporting. Since then, the doe continued to strain for about three hours and then went to lateral recumbency.

At the time of presentation, the doe was dull and anorectic with running down health condition. The rectal temperature, heart rate and respiration rate were recorded as 102.2 °F, 146 beats per minute and 35 breaths per minute, respectively. The abdominal palpation revealed the presence of two more foetuses. On clinico-gynaecological examination, the cervix was found open without any delivery efforts. Based on the history and clinical findings, the case was diagnosed as secondary uterine inertia and the doe was subjected to assisted delivery.

TREATMENT AND DISCUSSION

The doe was restrained on its lateral recumbent position by securing all four legs. The posterior most foetus was fixed by gripping it trans-abdominally with the help of an assistant. A well lubricated blunt end of a thermometer was introduced into the uterus to straighten the reproductive tract. After straitening the reproductive tract, the dead foetus was delivered by manipulating it through the abdominal wall via steady and gentle push (Fig. 1). However, due to unavailability of suitable sized instrument, the second foetus was not able to deliver through assisted delivery method and it was decided to facilitate delivery by medical management.

The doe was administered oxytocin injection IM (5 IU or 1 ml; Oxytocin; Hindustan Medicines Pvt. Ltd.) and after five minutes calcium injection was given IM (1 ml; Calvit12; Marc India Ltd.). The doe was kept undisturbed under observation following medication.

Delivery efforts were noticed after thirty five minutes of oxytocin injection and the second foetus was palpated near the vulvar opening after one hour of oxytocin injection. Subsequently, the kit was delivered with gentle abdominal maneuvering. The parts of placenta was also expelled immediately after that. The doe was examined by abdominal palpation and confirmed to have no more foetuses inside. The doe was treated using ceftriaxone sodium at 50 mg/kg body weight IM (Intacef; Intas Pharmaceuticals Ltd.) and chlorpheniramine maleate at 1 mg/kg body weight IM (Alervil; Marc India Ltd.) for three days and multivitamin syrup (Multistar Liquid; Division of Manakind Pharma Ltd.) at 1 ml orally for 15 days. The doe recovered uneventfully within one week.

Dystocia is uncommon in rabbits; hence this area is less explored due to case limitation. Due to smaller body size and inadequate vaginal space, per-vaginal delivery is recently reported to be more challenging in this species (Kumar *et al*., 2020). The major causes of dystocia in

Fig. 1: Assisted delivery of foetus by abdominal maneuvering in therabbit doe.

rabbits are obesity, foetal oversize, narrow pelvic canal, intrauterine foetal death or uterine inertia. (Gruaz *et al*., 2017). In the present case, one foetus was successfully delivered with assisted delivery method, which can be adopted by a field veterinarian having access to limited obstetrical facility (Ahmed *et al*., 2020). The second foetus was delivered by administration of oxytocin and calcium treatment. In the present case, the dose of oxytocin administered was higher than dose reported by Gruaz *et al*., 2017, where 1-3 units oxytocin was used for management of uterine inertia in doe. However, no complications were recorded following higher dose of oxytocin in the present case. This therapy helps in initiation of uterine contractions, promote uterine involution, reduce postpartum hemorrhages and helps expulsion of placentas retained in uterus (Gruaz *et al*., 2017). The doses of anitibiotic and antihistaminic were similar with the records of Kumar *et al*. (2020) in the post-operative management of dystocia in a rabbit.

CONCLUSION

Dystocia is an important clinical emergency condition in animals. Assisted delivery could play a crucial role in management of dystocia in small animals as it reduces the chances of dam mortality due to surgical trauma or stress. This paper describes a technique of management of secondary uterine inertia by assisted delivery method followed by medical management in a rabbit doe.

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