Haryana Vet. (March, 2023) **62(SI),** 104-105 ISSN 0033-4359 (P) **Clinical Article**

SURGICAL MANAGEMENT OF DYSTOCIA DUE TO ACAUDATE FETUS IN A RABBIT DOE

BHAVNA*, R. KUMAR[1], A. KUMARI[1] AND S.K. BHARTI[2]
Department of Veterinary Gynaecology and Obstetrics, [1]Department of Veterinary Surgery and Radiology,
[2]Department of Veterinary Anatomy, Bihar Veterinary College,
Bihar Animal Science University, Patna-800014, India

Received: 01.04.2022; Accepted: 04.06.2022

SUMMARY

A pregnant rabbit doe with the history of vaginal bleeding was brought in the Veterinary Clinical Complex of Bihar Veterinary College, Patna. The animal aged 1.5 years with about 26 days of pregnancy, was dull and depressed. Radiography of abdomen revealed presence of three fetuses in the uterus. Caesarean section cum ovario-hysterectomy was performed through mid-ventral incision under general anaesthesia using xylazine and ketamine @5 mg/kg body weight and 50 mg/kg body weight, respectively through intramuscular route. Three dead fetuses, including one acaudate fetus, were removed along with the placentae. Post-operative treatment was given using Azithromycin syrup @ 20 mg/kg body weight orally twice daily for 7 days and meloxicam syrup @ 0.4 mg/kg body weight orally once daily for 7 days. Regular antiseptic dressing of the surgical incision site carried out and the skin sutures were removed 10th day post-operative.The recovery was uneventful.

Keywords: Abortion, Caesarean section, Ovariohysterectomy, Rabbit

How to cite: Bhavna, Kumar, R., Kumari, A. and Bharti, S.K. (2023). Surgical management of dystocia due to acaudate fetus in a rabbit doe. *Haryana Vet.* **62(SI)**: 104-105.

Rabbits as companion animals and pets have become very popular these days among pet lovers. Rabbit does, unlike other animal species, have a unique genital tract having no uterine body where each uterine horn is continued into a separate cervical canal that opens directly into cervix (Bishop, 2002; Quesenberry and Carpenter, 2012). Rabbits have a gestation period ranging from 29-35 days with an average of about 30-32 days (Bishop, 2002; Harkens and Wagner, 2010; Quesenberry and Carpenter, 2012) and the litter size ranges from one to twelve with an average of six (Mayer, 2016). Dystocia is the inability to deliver the fetus from the uterus during parturition even after completion of full gestational term and may be due to maternal or fetal causes (Dickie, 2011). Dystocia in rabbits is quite uncommon as the normal parturition (kindling) generally completes within thirty minutes after onset (Easson, 2001; Harcourt, 2002; Quesenberry and Carpenter, 2012).

A rabbit doe of about one and half years of age, weighing 1.8 kg was brought to the Veterinary Clinical Complex of Bihar Veterinary College, Patna in dull and depressed condition. The doe was mated about 26 days back. As per history, vaginal bleeding was observed since last night in the doe with signs of straining without any progression. On abdominal palpation, the fetuses were felt. Abdominal radiography in the lateral position was done which confirmed the presence of three fetuses (Fig 1). As the vulval passage was narrow, manual extraction of fetuses could not be attempted. It was decided to deliver the fetuses surgically through caesarean section.

The animal had a rectal temperature of 102.8° F and heart rate of 240 beats/minute. The animal was put under general anaesthesia using xylazine and ketamine @5 mg/kg body weight and 50 mg/kg body weight, respectively (Martin and Kirsipuu, 2016; Sarkar *et al.*, 2017; Yadav, 2018). The animal was secured properly in dorsal recumbency. Ventral abdomen was cleaned and betadine was applied on the surgical site. After giving a 3cm long mid-ventral incision through the linea alba about 1 cm behind the umbilicus, the gravid uterus was exteriorized. The uterus was incised to deliver the fetuses which revealed one acaudate dead fetus present along with the two fully developed dead fetuses. As further breeding of animal was not intended by owner, ovariohysterectomy was performed after ligation of the ovarian as well as cervical ends of the uterus along with ligature of ovarian blood supply using Vicryl® No. 1-0. Muscle layer along with peritoneum was also sutured with Vicryl® No.1 using simple continuous suture pattern. The skin was then closed with simple interrupted suture pattern using nylon suture (No. 0).

The owner was instructed to keep the surgical site clean using antiseptic solution and application of Povidone iodine ointment twice daily. Post-operative treatment was given using Azithromycin syrup @ 20 mg/kg orally twice daily and meloxicam syrup @ 0.4 mg/kg body weight once daily for 7 days. Skin sutures were removed after 10 days

*Corresponding author: drbhavna260@gmail.com

Fig 1. Radiograph showing fetuses in the uterus

as the surgical site healed completely.

Prenatal mortality before 3 weeks of gestation is likely to cause resorption of the fetus, whereas if it occurs after 3 weeks, it results in abortion (Harkens and Wagner, 2010; Quesenberry and Carpenter, 2012). In rabbits,fetal loss can occur at gestation days 13 or 23, times at which the placentation changes and when the fetuses can be dislodged, respectively (Harkens and Wagner, 2010) butduring the last part of gestation, when the fetus is independently viable, stillbirth may occur. Prolonged gestation often results in small litters, usually stillborn, and may contain 1 or 2 abnormally large or abnormal fetuses (Harcourt, 2002). Other possible explanations for mismatch in fetal size include heredity, breed, and delayed implantation or development of a small fetusin utero. In the present case, the doe was presented at 26 days of gestation, so the presence of an abnormal, acaudate fetus might have been the underlying cause of dystocia. The owner was advised to provide laxative diet to the animal for next 3-4 days so as to maintain good intestinal peristalsis. With proper post-operative treatment and care of the surgical incision site, the animal recovered uneventfully with a complete wound healing in 10 days.

The present report concludes that presence of fetal abnormality might be one of the reasons causing dystocia in rabbits and its surgical management can be successful by taking proper care post-operatively.

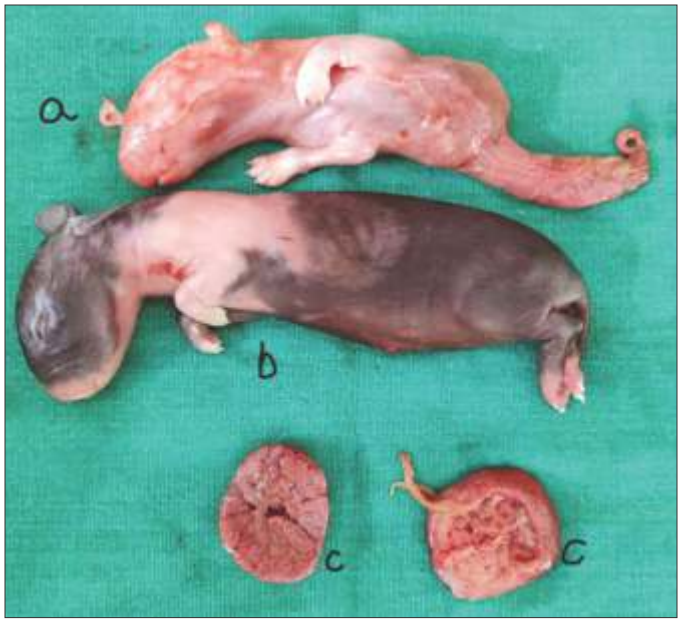

Fig 2. (a) Incompletely formed acaudate fetus along with (b) the normal fetus and (c) placentae

REFERENCES

Bishop, C.R. (2002). Reproductive medicine of rabbits and rodents. *Vet. Clin. North. Am. Exot. Anim. Pract.* **5**: 507-535.

Dickie, E. (2011). Dystocia in a rabbit (*Oryctolagus cuniculus*). *Can. Vet. J.* **52(1)**: 80-83.

Easson, W. (2001). A review of rabbit and rodent production medicine. Semin. *Avian Exot. Pet Med.* **10**: 131-139.

Harcourt-Brown, F. (2002). Textbook of rabbit medicine. (2nd Edn.) Oxford: Butterworth- Heinemann. p. 348.

Harkness, J.E. and Wagner, J.E. (2010). Biology and medicine of rabbit and rodents. (5th Edn.,) Philadelphia: Lia and Fabiger. pp. 33-34.

Martin, M. and Kirsipuu, V. (2016). Rabbit anaesthesia. In: Institutional animal care and use procedures, Cornell University. p. 6.

Mayer, J. (2016). Breeding and reproduction in rabbits. The Merck Veterinary Manual. (11th Edn.) Merck & Co., Inc., Rahway, New Jersey, USA. p. 1939.

Quesenberry, K.E. and Carpenter, J.W. (2012). Ferrets, rabbits and rodents: Clinical Medicine and Surgery. (3rd Edn.) St. Louis, Missouri, Saunders. pp. 163-164.

Sarkar, P., Mandal, D., Kumar, V. and Mondal, M. (2017). Dystocia in rabbit and its surgical management. *Explor. Anim. Med. Res.* **7(2)**: 216-217.

Yadav, S.K. (2018). Anesthesia management for emergency cesarean section in a rabbit. *J. Anesth. Crit. Care Open Access.* **10(5)**: 172 174.