



Rare Case of Dystocia in Rabbit and its Surgical Management

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Abstract

The female rabbit has unique reproductive tract with no uterine body and each uterine horn has its own cervix that opens directly into vagina. Dystocia is not common in rabbit, as normal delivery is completed within 30 minutes from the onset of parturition. A 4-year-old, 25 days pregnant female rabbit was presented to small animal Gynaecology and Obstetrics unit of Madras Veterinary College teaching hospital with a history of vaginal bleeding, fetid discharge, straining. On abdominal palpation, distended uterus with fetuses was palpable. Lateral abdominal X-ray showed presence of four fetuses and abdominal ultrasound revealed presence of non-viable fetuses. Patient was extremely lethargic and dehydrated on presentation and a decision to perform emergency caesarean section was made.

Keywords: Caesarean Section; Dystocia; Rabbit

Introduction

The female rabbit reproductive tract is unique, having no uterine body and each uterine horn has its own cervix that opens directly into vagina [1,3]. Rabbits are prolific breeders, induced ovulators and reproduce quickly; a doe can produce more than twenty offspring [3]. Gestation period of rabbit ranges from 28-31 days and has average litter size of 3-8 [5]. Pregnancy in rabbit can be detected by abdominal palpation 10-14 days after mating; fetal parts can be felt as small masses [1,5]. Resorption of fetus can take place before 20th days of gestation and the process is very rapid. Abortion is uncommon and occurs after 25th of gestation [8,11]. In case of prolonged gestation, one or more abnormal kits may be present, usually born dead and if not expelled, mummification or maceration can occur [11]. Dystocia is inability to expel the fetus from uterus after completion of gestation and is mainly due to maternal or fetal complications. Maternal abnormalities like pelvic abnormality or deformity, reproductive tract abnormality or uterine inertia [9]. Fetal abnormalities include malpresentation, malposition or malposture, oversized fetus or dead fetus [9,10]. In the present case report, dystocia was mainly due to dead fetus and unstable condition of patient. Patient was treated surgically by explorative laparotomy technique.

History and clinical observation

A 4-year-old, 25 days pregnant female rabbit was presented at small animal Gynaecology and Obstetrics unit of Madras Veterinary College teaching hospital with dull, depressed and dehydrated condition. General clinical examination of patient revealed lethargy, mottled skin, dehydration, vaginal bleeding, fetid discharge, straining and lack of bowel sound. Vital parameters showed rectal temperature of 103°F and heart rate 240 beats/minute. Complete Blood Count (CBC) and biochemistry shows neutrophilia (54%) and anemia (HB; 8 g/dl). Abdominal palpation revealed presence of fetus but no fetal movements were felt on ballotment. Ultrasonographic examination revealed presence of fetal parts and no signs of viability (no heartbeat visualized). Lateral abdominal radiograph was taken which shows presence of four fetal skeletons with abnormal presentation, position and posture. Due to narrow passage of vulva, fetus extraction was not possible.

Diagnosis and treatment

On the basis of history, clinical signs and clinical examination, it was diagnosed as the case of dystocia. Due to narrow passage of vulva, fetus extraction was not possible. As the patient's condi-

tion starts deteriorating and because of presence of dead fetuses, quick decision of surgery was made and patient was prepared for caesarean section [2,11]. Patient was positioned in dorsal recumbency, fur was carefully clipped and skin was prepared aseptically.

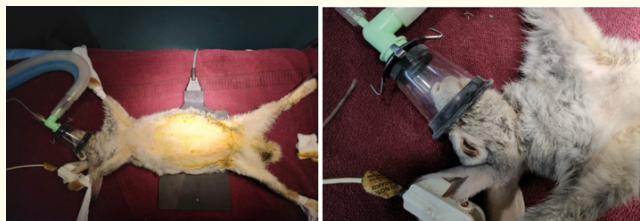


Figure 1: Preparation of Patient.

The patient was premedicated with Butorphanol @ 0.2 mg/kg I/M, Midazolam @ 0.2 mg/kg I/M, given in lateral thigh muscle. Rabbit was preoxygenated for 10 minutes before mask induction with 4% isoflurane. After the onset of good plan of anaesthesia, with adequate muscle relaxation, isoflurane was reduced to 2.5 % maintenance dose [6]. Caudal mid ventral incision was given and uterus was identified and exteriorized [4,7]. The pedicles with utero-ovarian vessels was identified and ligated with PGA (3-0). Procedure was repeated on other side and cervix was then ligated, transfixed and removed. Linea alba followed by subcutaneous tissue was sutured using PGA (3-0) by simple continuous suture pattern. Finally, skin was sutured using polyamide (4-0) by cruciate mattress pattern [2,4,7]. Postoperative management was given by administering enrofloxacin @ 10mg/kg I/M once a day, Meloxicam @ 0.2 mg/kg I/M with discharge advice for oral administration of Enrofloxacin @ 10mg/kg P/O and Meloxicam @ 0.2 mg/kg P/O. By taking proper postoperative care and management, rabbit recovered uneventfully after caesarean section.

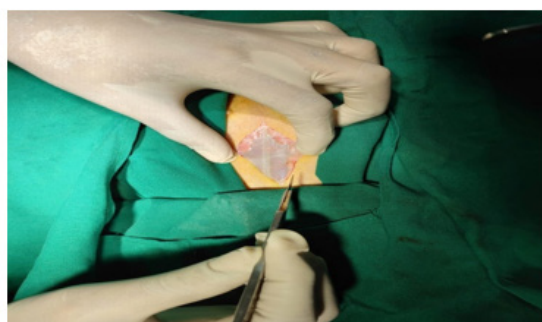


Figure 2: Subcutaneous tissue and fat are sharply dissected until the linea alba is visible.



Figure 3: Cecum, lying at the cranial aspect of the incision.



Figure 4: After locating uterus, it was gently retracted out of the peritoneal cavity.

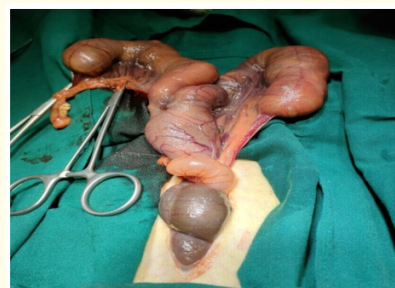


Figure 5: Pedicles with utero-ovarian vessels was identified and



Figure 6: Linea alba followed by subcutaneous tissue was sutured using PGA (3-0) by simple continuous suture pattern.

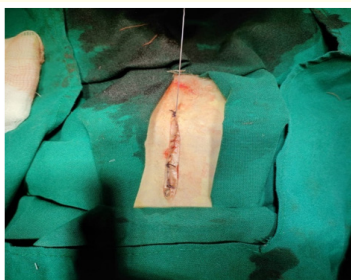


Figure 7: Finally, skin was sutured using polyamide (4-0) by cruciate mattress pattern.

Conclusion

Obstetrical problems are rare in rabbits. Many disease or disorders associated with reproductive tract of rabbit can be diagnosed by abdominal palpation, ultrasonography, radiography and explorative laparotomy. Pregnant does are susceptible to complications like toxæmia, septicæmia, fetal resorption or death of fetus. So, it is important to ensure that they do not become stressed or anorectic during the entire period of gestation. Dystocia is usually uncommon in rabbit, but sometimes it can occur due to maternal or fetal abnormalities. In order to prevent further complication, explorative laparotomy is indicated under strict aseptic technique. Good postoperative care and effective analgesia are essential to prevent postoperative complications.

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