

## **Uterine rupture with alive twins in a Holstein Frisian cow: a case report**

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### **Abstract**

This report describes a case of uterine rupture in a cow with alive twins, and its treatment.

**Keywords:** Dystocia; Uterine rupture; Caesarean section; Twins; Holstein Frisian; Cow.

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### **تمزق الرحم بأجنة توأم حية في بقرة هولشتاين فريزيان: تقرير حالة**

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### **الخلاصة**

يصف هذا التقرير حالة تمزق الرحم بأجنة توأم حية في بقرة لأول مرة وطريقة التعامل معها.

Rupture of the uterus may occur spontaneously, but faulty obstetric technique is a more frequent cause (1). Spontaneous rupture is most likely to arise in association with uterine torsion or with failure of cervical dilatation but is also possibly due to the gross uterine distension that occurs with twins in one horn, with hydrallantois or with excessive fetal size. The most likely time of spontaneous rupture is in late gestation or during labour (2).

### **History and clinical signs**

The cow involved was seven years old Holstein Frisian. The veterinarian and the farm supervisor's of the College of Agriculture and Forestry came to the Department of Surgery and Theriogenology Clinic, College of Veterinary Medicine, University of Mosul, claimed that the cow had dystocia since 24 h and recumbent for 72 h due to hypocalcaemia. On the farm, we expected to find the cow with a signs of dystocia. The animal was in lateral recumbency, without any signs of straining. History from farm workers revealed the cow fall down heavily due to severe kick or horn-gore on its abdomen. Physical examination of the cow revealed a normal temperature

(38.2° C), shallow respiration (36/min) and increased pulse rate (126/min). The vulva was wiped cleaned with damp clean towel, then disinfected with iodine-povidine, and then washed again with water. On vaginal examination, the cervix was completely closed. It was difficult to perform rectal palpation due to lateral recumbency. The cow approached to labour recognized by slackening of the pelvic ligaments and the change of the mammary secretion from a relatively transparent, honey-like secretion to an opaque cellular whitish-yellowish secretion (colostrums) as well as history from farm record.

### **Treatment**

Caesarean operation was performed with the dam on the left lateral recumbency. Sedation was avoided because it may be detrimental to fetal survival and may prolonged recumbency. The cow was placed on her right side and her left hind leg pulled backward and fixed in this position by tying to a post. A local anesthetic of inverted-L block of the ventro-lateral laparotomy using 2% lidocaine HCL was performed. A 25 cm long incision was made 8 cm lateral and parallel to the left external abdominal milk vein. The

incision passed through the skin and underlying rectus abdominis muscle. The peritoneum was lifted to expose the uterus. On searching for the uterus in abdominal cavity, the most surprising thing is the fetal membranes were in the abdominal cavity and these fetal membranes were intact and twin fetuses were alive. The fetuses were removed and the uterus was exposed showing rupture in the right horn. The ruptured uterus was closed with two rows of inverting sutures and returned to abdomen. Before closure of the laparotomy incision penicillin  $3 \times 10^6$  IU and streptomycin 3 g dissolved in distilled water were instilled into the abdomen to minimize risk of peritoneal infection. Post operative care was followed by injections with estradiol benzoate 6 mg followed by oxytocin 100 IU 12 h later and 5 days course of antibiotics intramuscularly. This is the first record of such a case in cows. A retrospective online search

of rupture of uterus of a cow with living twin fetuses identified no such case was recorded. The farm supervisor reported the twin calves were doing well. In our opinion, accidental rupture of the uterus of this cow was likely to occur due to the cervix is completely closed and may be due to external violence causing rupture of the uterus as the history of the cow falls heavily and receives a severe kick on its abdomen.

### **References**

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