Laparohysterectomy as a Therapy for Uterine Rupture:

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Introduction

Rupture of the bovine uterus is observed occasionally in late pregnancy or during parturition and may be the cause or result of dystocia (Vogler 1965; Sloss 1974; Pearson and Denny 1975). Several authors have reported extensive series of uterine rupture repair either per vaginum, by everting the uterus or by laparotomy (Meyers 1953; Spadiut 1960; Bacchilega 1966; Pascoe 1968; Pearson and Denny 1975; Sloss and Dufty 1980).

This paper describes the treatment of uterine rupture by means of a laparohysterectomy.

Surgical Procedure

The surgery is performed as a left flank laparotomy with the cow standing. Epidural analgesia and a distal paravertebral block are induced with 2% lidocaine. After clipping, the operation site is prepared for surgery.

The abdomen is entered through a vertical incision and the calf is delivered by Caesarean section. If necessary the uterine wound is enlarged in order to facilitate the delivery of the calf. Spillage of uterine contents into the abdominal cavity is prevented as much as possible. After the damage to the uterus is assessed and considered irrepairable, the uterus is amputated. A tourniquet with intravenous tubing (5/32" x 3/64" Rubber Tubing, Haver Lockhart) that has been disinfected in alcohol, is applied as caudally as possible around the uterus. Several windings and knots are applied on the site of the ligation, providing enough pressure to prevent hemorrhaging. After the excess tubing is cut off, the uterus is brought outside the abdomen and is amputated about 10 cm. cranial to the tourniquet. Closure of the abdominal wall is routine. A 10 day treatment with broadspectrum antibiotics is prescribed.

Clinical Cases (see table)

A total of 8 laparohysterectomies were performed. All animals were presented because of dystocia. In all cases an attempt was made to correct any faulty postures and to deliver the fetus by manual traction. In 4 cases uterine rupture had occurred spontaneously and was not detected until a laparotomy was performed. In 6 cases the head of the fetus was deviated to the side of the uterus and in these cases a rupture of the dorsal wall of the uterus, anterior to the cervix, was present. In two cases (numbers 5 & 8) traction was applied to the fetus by the owner, while the head of the fetus was deviated laterally. In case number 3 the dorsal uterine wall was perforated while performing a fetotomy on a fetus that was becoming emphysematous. In case number 7 the body of the uterus was ruptured as an attempt was made to reposition a fetus that was affected with arthrogryposis in a posterior presentation with both hips flexed. All operations were performed in the clinic and all were sent home immediately after the surgery, where the aftercare was done by the owner. All animals survived the immediate stress of the laparohysterectomy. All animals received oxytetracycline intraperitoneally at the time of the surgery and a 10 day parenteral treatment with the same antibiotic was prescribed. Only one animal, (case number 3) died 3-4 weeks after surgery as it kept losing weight and it was euthanized by the owner.

One animal (case number 5) had a slow recovery as the abdominal wound became infected and a purulent discharge from the vulva was noted. On examination 7 days post partum, perivaginal reaction was present and vaginal exploration revealed a purulent discharge from the stump and an opening in the vaginal wall beside the stump into the abdominal cavity. Antibiotic treatment was continued for 10 more days and the cow made an uneventful recovery.

Table One

nr.	DAM breed	age	rupture	foetus	recovery
1	mixed beef	3yrs	spontaneous	lateral head posture live calf	uneventful
2	mixed beef	3yrs	spontaneous	lateral head posture live calf	uneventful
3	mixed beef	7yrs	fetatome	getting emphysematous dead calf	continuous weight loss, euthanized 3-4 weeks pp
4	mixed beef	18mo	spontaneous	lateral head posture live calf	uneventful
5	angus cross	8yrs	traction	lateral head posture live big calf	1 week pp infected incision; perivaginal reaction; vaginal discharge; prolonged treatment
6	mixed beef	2yrs	spontaneous	lateral head posture live calf	uneventful
7	mixed beef	2yrs	reposition	arthrogryposis posterior presentation with both hips flexed dead calf	uneventful
8	mixed beef	2yrs	traction	lateral head posture live calf	uneventful

Discussion

Hysterectomy in the bovine animal by means of a tourniquet has been described as a treatment for the prolapsed uterus with complications that render replacement impossible or impractical (Aehnelt and Gruner 1972; Sloss and Dufty 1980). Others (Walker and Vaughan 1980) have been unsuccessful with this method.

This article describes to my knowledge for the first time amputation of the pregnant uterus by means of a laparohysterectomy. All animals survived the surgery and severe hemorrhaging did not occur. The one animal that was euthanatized probably developed a peritonitis as the fetus was getting emphysematous at the time of surgery. The reported overall maternal death rate of uterine rupture ranges from 27% to 44% (Sloss 1974; Pearson and Denny

1975).

In this series of laparohysterectomy, the overall maternal death rate was 12.5% whereas all the cows with live calves survived and nursed their calves.

This method is simple, and in my opinion, safe and can be used to save cattle for slaughter.

References

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