Lambing

Lambing Part 3 - Vaginal and Uterine Prolapse

Phil Scott DVM&S, DipECBHM, CertCHP, DSHP, FRCVS

VAGINAL PROLAPSE

The diameter of a vaginal prolapse varies from an area of dorsal vaginal wall of approximately 8 cm up to 20 cm when the prolapse may contain urinary bladder, uterine horn(s) or both of these structures.

Fig 1: A vaginal prolapse extending for 10-12 cm.

Fig 2: The diameter of this vaginal prolapse extends to 20 cm and contains the urinary bladder

Vaginal prolapse occurs

- during the last month of pregnancy
- typically affects around 1 per cent of pregnant sheep
- but the prevalence varies from zero to 15 per cent

Many factors have been implicated in the cause of vaginal prolapse including:

- excessive body condition (body condition score 4 and above; scale 1 to 5),
- multigravid uterus (triplets more than twins)
- high fibre diets particularly those containing root crops,
- limited exercise in housed ewes,
- lameness leading to prolonged periods in sternal recumbency,

Other factors may include:

- Short-docked tails (but the condition occurs in undocked mountains breeds)
- steep fields
- sub-clinical hypocalcaemia.

Fig 3: Short-docked tails (this ewe) have been implicated in vaginal prolapse.

Ewes with vaginal prolapse may show many behavioural signs consistent with first stage labour including:

- isolation from the remainder of the flock,
- failure to come forward for concentrate feeding,
- long periods spent in lateral recumbency with repeated, short duration, forceful abdominal contractions and associated vocalisation.

Fig 4: Ewe straining with a vaginal prolapse with behaviour consistent with first stage labour

The duration of prolapse directly affects

- the degree of contamination with faeces, bedding material and soil,
- the friability of the vaginal mucosa.
- the outcome

The vaginal wall quickly becomes swollen and friable greatly increasing the risk of rupture during manual replacement.

Treatment of vaginal prolapse

If it is necessary to transport sheep with vaginal prolapse to the veterinary surgery then the prolapse should be covered with a towel soaked in warm water to prevent further damage.

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Effective caudal analgesia administered by a veterinary surgeon greatly facilitates replacement of the vaginal prolapse. Emptying of the bladder can then be readily achieved in the standing ewe by raising the prolapse relative to the vulva thereby reducing the fold in the neck of the bladder at which point urine flows freely.

Fig 5: The prolapse should be carefully cleaned in warm water containing surgical scrub solution.

The vaginal prolapse should be replaced with the ewe standing, indeed the vaginal prolapse will frequently return to the normal position within five minutes once caudal analgesia has been effected, and straining ceased. There are no indications to suspend the ewe by the pelvic limbs.

Fig 6: Administration of local anaesthetic to block straining by the ewe.

An analgesic drug will be administered intravenously by the veterinary practitioner before replacing the vaginal prolapse to reduce pain. Antibiotics should be given daily for three to five days afterwards; penicillin is cheap and effective. Alternatively, a long acting antibiotic such as oxytetracycline can be administered.

Methods of retention after replacement of vaginal prolapse

Methods of retention after replacement of vaginal prolapse include:

- Buhner suture
- Plastic retention devices
- Harnesses or trusses

Buhner suture

A modified Buhner suture of 5 mm nylon tape is placed by the veterinary practitioner in the subcutaneous tissue around the vulva 2 cm from the labia and tightened to allow an opening of 1.5 cm diameter (two fingers). The modified Buhner suture can easily be untied to allow examination of the posterior reproductive tract for signs of first stage labour.

Fig 7: Pain-free insertion of a Buhner suture using extradural anaesthesia.

Fig 8: Buhner suture is tightened to allow an opening of 1.5 cm diameter (one-two fingers).

Fig 9: The Buhner suture must be slackened before the expected lambing date. Note the allanto-chorion indicating the end of first stage labour in this ewe.

Sutures which penetrate the vaginal mucosa, such as single interrupted or mattress sutures, must be avoided as urine scalding of vaginal mucosa around the suture material in conjunction with secondary bacterial infection forms large diphtheritic areas which cause considerable discomfort and resultant straining. Furthermore, single interrupted and mattress sutures must be removed to permit digital examination of the ewe's posterior reproductive

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tract during periods of suspected first stage labour, and cannot easily be re-tied.

All ewes with retention sutures for vaginal prolapse must be clearly identified and staff notified that there could be problems at lambing with this group of sheep. Permanent ewe identification is essential to ensure culling before the next breeding season.

Plastic retention devices

Plastic retention devices are shaped such that the central loop is placed within the vagina which is then held within the pelvic canal by the two side arms tightly tied to the fleece of the flanks. These devices can work well in mild early cases.

Fig 10: Plastic retention devices can work well in mild early cases.

Fig 11: The plastic retention device is not working in this case - effective analgesia is essential in this case and could be provided by extradural injection and intravenous NSAID injection.

Harnesses or trusses

Fig 12: Effective management of a vaginal prolapse in a Blueface Leicester ewe using a truss.

Harnesses and trusses are very useful in situations where the prolapse is detected early and there is little superficial trauma/contamination. Harnesses and trusses must be fitted carefully, and inspected regularly, to prevent pressure sores.

Impending parturition

The Buhner suture should be untied well before the expected lambing date.

Impending lambing can be estimated from:

- The ewe's keel mark
- Slackening of the ligaments around the ewe's tail head
- Udder development and accumulation of colostrum in the teats

Signs of first stage labour include:

- separation from the remainder of the group,
- inappetance,
- frequent getting up and lying down,
- sniffing at the ground, and abdominal straining
- foetal membranes present at the vulva.

If the cervix has already fully dilated, and first stage labour completed, a lamb may be forcefully expelled as soon as the retention suture has been slackened.

Complications as a consequence of vaginal prolapse

Complications as a consequence of vaginal prolapse include:

- Abortion
- Incomplete cervical dilation with possible prolapse
- Death of lambs causing death of the ewe

Many shepherds only present vaginal prolapses for veterinary attention when other methods have failed.

Abortion

Abortion may occur 24 to 48 hours after replacement of the vaginal prolapse. It is not known whether this event is a consequence of trauma to the placenta during prolapse or other factors. Ewes must be confined and carefully supervised after replacement of prolapses for signs of impending abortion.

Incomplete cervical dilation

Considerable trauma, superficial infection and oedema of the vaginal prolapse at the time of replacement may result in incomplete cervical dilation during first stage labour.

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Fig 13: Considerable trauma and oedema of the vaginal prolapse at the time of replacement may result in incomplete cervical dilation during first stage labour.

Death of ewe

Death of lambs which are not expelled may cause death of the ewe.

Fig 14: Death of lambs which were not expelled causing death of this ewe. Note the very distended (gas-filled) uterus containing emphysematous (rotten) lambs.

UTERINE PROLAPSE

Overview

Uterine prolapse occurs at a rate of approximately 0.1% of ewes at risk.

Fig 15: Uterine prolapse.

Causes

Uterine prolapse may occur either immediately after lambing or after an interval of 12 to 48 hours. In the first instance prolapse usually results as consequence of prolonged second stage labour culminating with the delivery of a large singleton lamb (see above). Uterine prolapse occurring after an interval of 12 to 48 hours generally results from straining caused by pain arising from infection and swelling of the posterior reproductive tract (see below) which have developed consequent to assisted delivery of the lamb(s).

Fig 16: Uterine prolapse occurring 48 hours after an assisted lambing Straining caused by pain from infection and swelling of the posterior reproductive tract caused the prolapse.

Clinical presentation

The everted uterus is readily identifiable by its large size (up to 50 cms long and 25 cms in diameter) extending from the vulva to below the level of the hocks with prominent caruncles and adherent foetal membranes.

The uterus is readily identified by:

- Size (to level of hocks)
- Prominent caruncles ("buttons")
- Often foetal membranes remain attached

Treatment

Unless the uterus is replaced correctly and fully inverted to its normal position within the abdomen, the ewe will continue to strain causing considerable distress and suffering, and re-prolapse. A uterine prolapse is best replaced by a veterinary surgeon under extradural anaesthesia.

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Fig 17: Successful replacement of the uterine prolapse featured in the slide above.

Infiltration of the vulva with 2 per cent lignocaine solution affords some degree of analgesia in order to insert retention sutures but this technique is much inferior to caudal block. A Buhner suture of 5mm umbilical tape affords the best means of retaining the uterus (see method for retention of vaginal prolapse above). Antibiotics, either procaine penicillin or oxytetracycline, should be administered intramuscularly daily for three to five consecutive days after replacement of the uterine prolapse to limit bacterial infection of the traumatised tissues and NSAIDs to reduce pain. The ewe's milk yield will be reduced for a number of days after replacement of the uterine prolapse and her lambs will require supplementary feeding. Unlike vaginal prolapse, it is unusual for an ewe to prolapse the uterus the following year thus there is no indication to prematurely cull such ewes.

Supportive treatment

- Antibiotics should be administered intramuscularly daily for three to five consecutive days after replacement
- NSAIDs to reduce pain
- Fresh food and ad-libitum clean water to promote milk yield
- Supplementary feeding of the lambs for several days

Evisceration through vaginal tear

Evisceration of intestines through a tear in the dorsal vaginal wall occurs spontaneously in heavily pregnant ewes during the last month of gestation.

Fig 18: Evisceration of intestines through a tear in the dorsal vaginal wall.

There is usually no history of prior vaginal prolapse or straining. The incidence may reach 2 to 5 per cent in some housed flocks. Excessive body condition, triplet pregnancy, and high fibre diets are thought to be risk factors but the precise mechanism is not known.

There is no treatment and affected ewes must be destroyed immediately for welfare reasons. If the ewe is due to lamb within three days the ewe could be shot and an emergency caesarean operation undertaken to salvage the lambs however this procedure is rarely successful. Furthermore, when evisceration occurs during late gestation in flocks lambing over a concentrated period there are no ewes to accept such weakly foster lambs.

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