DEALING WITH BOVINE PROLAPSES: EFFECTIVE TREATMENT APPROACHES

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Graham Duncanson suggests some top tips for cow prolapse cases, from chemical administration guidelines to surgical procedures to free stuck calves

ESTABLISHING whether a prolapse involves the vagina or the uterus is an important first step when a farmer calls to report such a case.

If the farmer is unsure, ask if the animal has calved. It is extremely rare for a non-pregnant cow to prolapse its vagina.

Some top tips for practitioners managing these cases include:

• Always keep your Seton needle sharp by covering it with some plastic tubing off an old fluid-giving set.

• When putting in a Buhner suture after replacing a prolapsed vagina in a pregnant cow, always tie it with a bow so that if the animal strains, the farmer can release the bow to check to see if the cow is parturient without taking out the stitch. If it is not parturient, he can tie the bow again.

• When called to a dairy cow with a prolapsed uterus, always check it is not suffering from milk fever. If this is the case, provide calcium before replacing the uterus – or you may find you are replacing a uterus into a dead cow.

• If called to Jersey or Guernsey cows showing signs of milk fever, they will show hypocalcaemia – not only when they are parturient, but also when they are in oestrus.

• It is advisable to never attempt intravenous administration of large volumes of calcium in a standing cow, as there is a danger it will stagger on top of you. It is very difficult to make sure the fluid goes intravenously and not perivascularly, and much better to administer the fluid in a clean manner subcutaneously. Obviously, it is different if the cow is recumbent.

• Remember never to give 25 per cent magnesium sulphate (it normally has a black top) intravenously. However, it can be given safely subcutaneously.

• If the farmer wants an indication as to whether a downer cow will ever get up again, take paired serum samples separated by 48 hours. If the creatine kinase value is rising, the chances of the cow getting up again are very poor.

• Never use empty calcium bottles to store any other fluid, due to the danger of mistakenly injecting this fluid into a cow with a flutter valve in the dark.

• If a cow ruptures its uterine artery at calving, grasp the artery with a pair of artery forceps and leave these in situ. Treat the cow with oxytocin to help uterine involution, and administer antibiotics, before returning in 48 hours to retrieve the artery forceps. Treat the cow with antibiotics for a minimum of 10 days; the rationale is that the cow can acquire a secondary infection around the clotted vessel, and then get a massive secondary haemorrhage.

• If called to a calving cow, once you have examined the animal and made a plan, always provide antibiotics and NSAIDs before you start traction, embryotomy or caesarean section.

• Is an epidural anaesthetic useful? I am undecided. Remember, the anaesthetic will only block the vulva and the posterior vagina – it will not stop the cow straining. An epidural is mandatory if you plan to perform an episiotomy or stitch the vulva.

• If called to a cow thought to be parturient by the farmer, but on examination is found to have a closed cervix, always smell your hand. This will help you to decide if the calf is alive or dead, as the latter state is indicated by a smell of decay; a rectal examination may be helpful. Explain to the farmer that, on balance, it is better to wait than rush into a caesarean section. If the cow is definitely very near to term, you can give it a prostaglandin injection and arrange a re-examination at a suitable time.

• If loops of bowel are presented per vagina, do not assume they belong to the cow and herald total disaster. They are more likely to belong to the calf, which is a schistosome.

Delivery is always difficult; sometimes it is possible to sever the trunk of the calf with a single

embryotomy, and cut and draw the two halves separately. Normally, however, a caesarean section is the only approach.

• When taking the embryotome, always remember the threader, a length of embryotomy wire at least 3m in length and a pair of wire cutters.

• When returning the embryotome, always remember to clean inside the tube when the tube is still wet, otherwise the debris will solidify and be very hard to remove.

• When faced with a calving cow where the calf is half out of it – with the calf's pelvis stuck in the cow's pelvis – check to see if the calf is still alive. If it is, it can normally be delivered via a slight rotation and renewed traction. However, prolonged severe traction (equivalent to three men) will result in damage to either the sciatic or the obturator nerve, and should be avoided. In my opinion, a caesarean section is not an option, so foetotomy is the only answer. Sadly, if the calf is not dead, euthanasia should be carried out.

Foetotomy is not a real problem, provided certain tips are followed. Place the loop of wire round the trunk as far caudally as possible. This is helped by some traction on the calf and pushing the embryotome into the cow's pelvis; the reason being that the next cut will be easier. Cut through the trunk with steady, long-sawing strokes. The cranial part of the calf, up to the lower lumbar area, can be removed. Having replaced the caudal end of the calf into the cow's uterus, place a heavy introducer or a closed bullring attached to a thin calving rope over the dorsal aspect of the calf and drop it between the calf's legs. Reach in ventrally and grasp the bullring.

Tie the embryotomy wire securely to the calving rope, and pull it into the cow and out again. Before starting the second cut, make sure the wire is exactly in the middle of the calf's pelvis. The danger is that if it is to the side, the second cut will only cut off one hindleg and the calf's pelvis will be as wide as ever. The two parts of the hindquarters are now easily removed separately.

• When faced with a parturient cow, with a relatively large calf, how do you decide if a caesarean section is required? This is the million-dollar question; I have been involved with calving cows for more than 50 years, and I still get it wrong. If in doubt, suggest a caesarean; if the farmer or a colleague suggests a caesarean, always do one.

• When faced with a massive, fluid-filled cow near to parturition, it is likely to be a case of hydrops uteri. The condition has two recommended forms: hydrops amnion, when excessive fluid is present within the amniotic sac, and hydrops allantois, when the allantoic sac is involved. At term in normal cows, approximately 20L of foetal fluids are present in the uterus, and three-quarters of this is in the allantois. In hydrops uteri, more than 10 times that may be present.

If the cow is in good condition, it can be left to come to calve normally. However, if the animal is in poor condition, parturition should be induced with a prostaglandin injection. Uterine drainage has

been advocated prior to parturition, to lessen the shock of such a large amount of fluid being lost at one time. This should be avoided, due to the risk of causing a uterine infection prior to parturition.

• When presented with a calving cow that the farmer says “is not getting on with it”, consider uterine torsion. The diagnosis will be straightforward on vaginal examination, as the condition is wrongly named – it is, in fact, a torsion of the anterior vagina. With the cow standing, try to insert your hand through the twisted vagina (if possible), and then on through the partially dilated cervix. Place the palm of your hand on the calf’s shoulder, or grasp the calf’s radius. Start rocking the animal from side to side. Suddenly, the calf should rotate into the correct position.

I would advise rolling the cow with the help of three people, as this is very effective. If the animal is standing, I cast it with the Reuff’s method and then roll the animal in the direction of the twist. Usually when the torsion is resolved, the cervix will only be partly dilated. Many textbooks advise waiting to allow cervical dilation to occur, though in my experience, this does not occur – you are left with a ringwomb-like condition. Therefore, I advise dilating the cervix with slow traction without any delay. Caesarean sections should, in my opinion, be the very last resort in uterine torsion cases.

• Always have a dedicated instrument and equipment box easy to hand containing all you require to do a caesarean section. It is much more efficient to have it all in one place. The box should contain:

– a sterile pack of instruments;

– a sterile scrubbing brush;

– a sterile tray cloth;

– two packets of sterile swabs;

– a sterile embryotomy knife or a disposable embryotomy knife;

– two scalpel blades, which must fit the scalpel blade holder in the sterile instrument pack;

– a sterile set of calving ropes, syringes and needles;

– pieces of cotton wool for cleaning the skin;

– a bottle of Hibiscrub;

– a bottle of oxytocin injection;

– a bottle of water for injection to dissolve two bottles of benzylpenicillin;

– three × 100ml of local anaesthetic;

– 100ml of penicillin/streptomycin; and

– a bottle of doxapram hydrochloride drops.

• Ideally, have the cow clipped on the left flank, but if this is not possible, I suggest a large transparent adhesive dressing is stuck on the cow’s flank after thorough cleaning with Hibiscrub. The incision can then be made through this dressing. Wide cling film can be wrapped around the cow to act in a similar manner. If a trial of labour has been attempted before starting the caesarean section, remember to remove the calving ropes.

• Before starting the caesarean, remember to have the tail secured so that the wound is not contaminated. Also remember to have a rope attached to the right hindleg of the cow and passed under its belly. If the cow goes to lie down during the operation, this rope can be pulled to make sure the animal lies on its right side.

• Do you provide a clembuterol injection to a cow before a caesarean section? In my experience, it can make exteriorising and closing the uterus much easier, and is readily reversed by oxytocin. Note it is not licensed for use in cows.

• Think welfare at all calvings. Remember: dead cows do not suffer.