

Workshop - DYSTOCIA IN DEER

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Workshop recommendations

1. INCIDENCE

Although no detailed surveys have been carried out it appears that the incidence of dystocia increases with breed body-size i.e. relatively low in fallow deer, medium in red deer and higher in N.Z. wapiti and Canadian Elk types.

In some areas, first calvers constitute 80% of the cases treated and so it appears that deer are following the same trends as other domestic species.

Individual properties may have a higher than usual incidence, especially if cross-breeding using hybrid, wapiti or Canadian Elk bulls is being carried out.

A recent survey of Waikato farms carried out by G. Asher has indicated an assisted birth-rate of 2% and dystocia as the cause of 40% of calf deaths. It is reasonable to assume that the number of dystocia cases treated by farmers or veterinarians only represents a proportion of those cases in which calf viability is threatened.

2. PARTURITION

The correct stage at which intervention in particular is warranted depends on understanding the normal event:-

- separation from herd and fence walking 12-36 hours prior to onset
- signs of discomfort and restlessness with vulval licking immediately prior
- 2nd stage labour 30min - 3 hours, hind usually stays in chosen spot although she may stand up and alter position slightly
- undisturbed hinds rarely rejoin rest of mob once parturition has commenced unless a problem has arisen.

Quiet observation, perhaps using binoculars, and early intervention in suspect cases appears to be the best approach especially when the value of the offspring is considered.



3. RESTRAINT

- a) Physical restraint, either manually or in a crush, has the advantages that there is no chance of foetal respiratory depression, and that the mother is fully conscious so that maternal instincts remain.
- b) Chemical restraint -
Epidurals - 2 mls of 2% xylocaine gives good results. This may allow many procedures without the need for further general sedation.

Sedation - keep doses as low as possible perhaps using 1/v administration to decrease reaction time and decrease the duration of effect. "Rompun" causes a marked drop in maternal blood pressure and respiratory depression in the foetus, lowering viability. The addition of small quantities of "Fentaz" to "Rompun" seems to potentiate drug action allowing lower dose rates, and gives the advantage of reversal using "Narcan" (no respiratory depression). [N.B. Xylazine may soon have a specific reversal agent].

General anaesthesia using gas is frequently used especially where animals can be transported to the clinic.

4. EXAMINATION TREATMENT

Normal obstetric procedures apply to deer but certain points should be made:

- maternal pelvic fractures are easily induced by excess traction or by attempts to reposition foetal limbs without due regard for the forces created
- Uterine tears can and do occur. Watch while repositioning limbs or turned back heads
- Do not use the lower jaw as a handle to reposition the foetal head. Dislocations and fractures may result
- Obturator nerve damage appears to result from relatively short periods of increased intrapelvic pressure. The use of short-acting anti-inflammatory steroids may be of benefit in certain cases.

In general, much care is required in the handling of dystocia in deer. It is better to consider caesarian section as an early treatment option rather than as a final resort when all else has failed. The routine use of fluid therapy in difficult cases or in those requiring caesarian sections will greatly increase hind survival.

5. CARE OF THE NEWBORN

Many calves are born with adequate reflexes and a normal heart beat, but with respiratory depression.

Specific reversal drugs such as "Narcan" ("Lethidrone" induces further respiratory depression), or "Recervyl" (when available) should be used in the neonate if the corresponding sedative was given to the mother during parturition.

Respiratory stimulants such as "Dopram" or "Myllophyline" may work in some cases.

Oxygen on hand will increase survival rates.

The use of oxytocin will make it easier to collect colostrum from the hind but if this fails then cattle colostrum appears to be a reasonable substitute.

Foetal limbs may sometimes be fractured during yarding for dystocia assistance but these will heal quickly with adequate immobilisation.

There are numerous ideas on how best to handle fawns resulting from assisted births. Some find that immediate contact between an alert hind, calf and membranes will allow bonding, but a high percentage of anxious animals tend to reject their offspring. Any attempt to lock the mother and calf in the yard overnight should be considered in the light that distressed hinds can easily kill the helpless calf. Handrearing is often the only alternative. However, milking goats can make excellent surrogate mothers, even for large wapiti calves (two goats may be required).

6. POST PARTURIENT COMPLICATIONS

Routine post delivery practice of using antibiotics and oxytocin is recommended in hinds. However, uterine infections seem relatively uncommon. The prognosis for those that do develop metritis seems poor.

Downer hinds resulting from nerve damage, pelvic fractures or injury are very difficult to treat. If at all possible prevent these problems from occurring.

7. CAUSES OF DYSTOCIA

Extensive debate exists on the causes of dystocia and without further evidence they will remain surmise and theory. Possible causes:

- a) Foetal-pelvic disproportion:
- 1) Stag effect. Cross-breeding using sires of larger breeds e.g. hybrid, wapiti or elk, can increase the incidence of dystocia. This effect can be greatly exaggerated if insufficient care is taken in selecting the female. Recent information has shown a high correlation between the external measurement of the inter-ischial distance and the horizontal pelvic diameter e.g. a distance larger than 9cm between the ischiatic tuberosities, (pin bones), has proven useful in selecting wapiti hinds suitable for mating with Canadian elk bulls. This parameter could be extended to select red hinds suitable for covering by wapiti bulls. Individual stags within a breed may leave offspring sufficiently larger than normal to increase dystocia.
 - ii) Dam effect. In light of recent information it would appear that while 65kg may be an adequate weight to achieve normal conception rates in yearling red hinds, it is too low to ensure easy fawning. Average 15 month mating weights in the 75-85kg range are attainable in red hinds and should be established as farmer goals.
- b) Late pregnancy feeding levels: moderating hind feed intakes during the last month of pregnancy may help to reduce the amount of intrapelvic fat, and reduce dystocia. This may, however, be difficult to achieve during a period of high pasture growth and with diverse calving times.
- c) Fitness theory. There is some suggestion that a moderate increase in exercise prior to calving can reduce dystocia. Problems in wapiti and elk cows in calf to elk bulls were greatly reduced when the herd was run on a steeper hill block.
- d) Uterine atony. This can be induced in hinds by frequent disruptions during parturition, often by well-meaning but over-anxious owners.

8. FUTURE OUTLOOK

In the short-term, dystocia problems are likely to increase as very little selection pressure is being applied against those animals which have problems. While animal prices are high very few animals will be culled and so they remain to spread detrimental genetic material within the National herd.