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Popular Article

Dystocia and Its Management in the Bitch

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Introduction

Dystocia is the inability of the dam to expel the fetus at parturition through the birth canal without assistance / difficult birth or inability to expel foetuses through the birth canal. The term dystocia stems from the Greek where *dys* means difficult and *tokos* means birth. The incidence of dystocia is not known in bitches, but according to some authors the frequency may be approximately 5% in the pregnant bitches. The Brachycephalic Breeds are reported to have a high frequency of dystocia (Linde-Forsberg, 2005).

Maternal Causes of Dystocia

The maternal causes of dystocia comprising 75% of all cases in the bitch. It includes uterine inertia, nervous voluntary inhibition of labour, narrow pelvic canal and uterine abnormalities.

Foetal Causes of Dystocia

Foetal causes of dystocia described for the bitch include oversized foetuses, malpresentation and rarely monstrosities. The incidence of fetal causes in bitch is 24.7%.

Clinical Signs of Dystocia Include

- Restlessness, Panting and Anorexia
- Prolonged gestational length.
- Vaginal discharge (green or bloody), i.e. lochia, in the end of gestation without delivery of the first foetus. Foetal fluids that have passed but, are not followed by delivery of a foetus.

Clinical Examination of The Dystocia

Bitches with dystocia should be examined regarding obstruction of the birth canal and signs of foetal malposition as this require immediate attention. Vaginal digital palpation and



radiographs may be used and blood samples to evaluate electrolytes, glucose and acid-base disturbances are recommended. Doppler or ultrasonography is used to count foetal heart rate which is important to ascertain foetal survival and wellbeing. A decrease in foetal heart rate is an indication for caesarean section.

Medicinal Treatment of Dystocia

In cases of primary uterine inertia, the owners should initially be instructed to try to induce straining by actively exercising the bitch. Yet, another means of induction of straining in the bitch with sufficient labour is by feathering of the dorsal vaginal wall. Feathering is inserting two fingers into the vagina and pushing with them against the dorsal vaginal wall, thus, inducing an episode of straining.

The bitch with complete primary uterine inertia has a normal rectal temperature but shows no evidence of labour. The cervix is often dilated, but the fetus is out of reach because of the flaccid uterus. Before initiation of medical treatment, obstruction of the birth canal must be excluded. Medical therapy advocated include calcium solutions, oxytocin and uterine spasmolytics like vetrabutine hydrochloride. Excessive panting during labor may result in metabolic disturbance of serum calcium levels. Even slight decreases in serum calcium can result in inefficacy of muscle contractions that may slow the progress of labour. If the response to medical treatment is incomplete or in cases of secondary uterine inertia and birth canal obstruction c-section or manual delivery is indicated.

Surgical Management of Dystocia

Anaesthesia and analgesia - Before induction of anaesthesia the bitch should be preoxygenated as apnoea is commonly seen after induction which may cause maternal and foetal hypoxemia and distress. Benzodiazepines may also be considered for sedation of the bitch and use of anticholinergic may improve neonatal outcome (Ryan & Wagner, 2006). The most commonly used anaesthetic protocols are isoflurane for induction and maintenance of anaesthesia or propofol for induction followed by isoflurane for maintenance of anaesthesia.

Caesarean Section - Celiotomy from the umbilicus to the pubis is most commonly performed, but a flank incision is described as an alternative (Gilson, 2003). The approach to the uterine lumen is preferentially an incision in the uterine body or the uterine horn that reduces the amount of vessels being severed. After delivery of all puppies and inspection of the uterus, the uterus is closed using two-layer continuous patterns; first layer may be appositional with care taken to avoid penetration of the mucosa, followed by a layer of inverting Cushing pattern. Placentas are removed if possible. The abdominal wall and cutis is closed in a standard way (Gilson, 2003). Oxytocin is commonly administered IV after closure of the uterus to reduce haemorrhage and to allow for detachment of remaining foetal membranes.



Conclusions

The incidence of dystocia in companion animals like the bitch is quite low but when it occurs it may constitute life threatening situations to both the dam and the young ones. So, immediate medical and surgical treatment is essential.

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