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Popular Article

An Overview of Dystocia in Various Animal Species

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Abstract

Dystocia can be defined as a difficult birth, and is an important economic issue in both the beef and dairy industry. Consequences of dystocia include increased fetal and maternal morbidity and mortality, reduced subsequent fertility, and increased labor. Attempts have been made to increase the objectivity of the diagnosis of dystocia by creating a hierarchical classification of dystocia according to the level of intervention that is required or through a binary classification into 'assisted' or 'not assisted' births. In principle, dystocia occurs when there is a failure of either the expulsive forces or the adequacy of the birth canal, or the disposition of the fetus.

Key Words: Dystocia, geomaterial disproportion, fetal mal-disposition

Introduction

Dystocia can be defined as difficult birth and is an important economic issue in both the beef and dairy industry. Consequences of dystocia include increased fetal and maternal morbidity and mortality, reduced subsequent fertility, and increased labor. Efforts to ameliorate overall herd health and profitability will improve overall herd health and profitability. The diagnosis and treatment of dystocia require a good understanding of normal parturition, sensitivity to the welfare of both dam and offspring, and good practical competencies. Attempts have been made to increase the objectivity of the diagnosis of dystocia by creating a hierarchical classification of dystocia according to the level of intervention that is required or through a binary classification into 'assisted' or 'not assisted'

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births. In principle, dystocia occurs when there is a failure of either the expulsive forces or the adequacy of the birth canal, or the disposition of the fetus. These failures relate to genetic factors derived from the sire and dam and management factors relating to the dam during and before pregnancy. There are different identified proximal, intermediate, and ultimate causes of bovine dystocia. Proximal causes: identifies at the time of an obstetrical intervention; fetomaternal disproportion, fetal mal-disposition, uterine inertia, or uterine torsion. Only when the ultimate causes have been identified can effective preventative measures be instituted.

Prevalence and Prediction of Dystocia

Cattle

The risk of dystocia is consistently higher in primiparous than multiparous cows. Among dairy breeds, the prevalence of dystocia in Holstein heifers is high, with figures of 17%, 21%, 22%, and 40% of all primiparous births requiring assistance. Fetomaternal disproportion is the most common overall cause of dystocia in cattle, with a relative frequency of about 50% of all dystocia (3.5% of all births). It is much more common in primiparous than multiparous animals, whereas dystocia due to faulty disposition of the fetus is relatively more common in multiparous than primiparous animals.

Many of these dystocia's due to 'faulty' disposition are, in fact, uncomplicated posterior presentations, which occur in about 5% of all births and which result in dystocia in up to 50% of such births. The prevalence of dystocia due to anatomical defects of the dam is relatively low: the prevalence of uterine torsion has been estimated at around 7% to 10% of dystocia requiring veterinary attention (0.25% of all births) incomplete cervical dilation at around 2% to 5%. Uterine inertia, often associated with hypocalcemia, >5 years of age. The prevalence of fetal monsters is relatively high in the cow. They are generally of the distorted and celosias types, Schistosoma reflexus and perosomus elumbis being the most common.

2. Sheep and Goats

A) Ewes

The prevalence of dystocia in sheep is influenced by breed, parity, and litter size. Fetomaternal disproportion and faulty disposition of the fetus are the two most common causes of dystocia in sheep. Lamb birth weight is an important contributor to fetomaternal disproportion, >6 kg birth weight; lamb mortality increases when the birth weight falls <3 to 4 kg.

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Maldisposition of the fetus is more common with multiple than singleton births. Pluriparous ewes are relatively more likely to experience dystocia due to faulty fetal disposition than are primiparous animals, and primiparous ewes are more likely to experience dystocia due to disproportion than are pluriparous ewes. The most important maternal cause of dystocia in ewes is the nondilation of the cervix (ringwomb). There is an impression that incomplete dilatation of the cervix in sheep is more prevalent now

B) Does

The prevalence is generally held to be relatively low. Cervical non-dilation is a significant cause of dystocia in does. Uterine torsion is generally considered to be relatively rare in the doe. Faulty disposition of the fetus is the most common cause of fetal dystocia: in 60% and 75% of such cases. Head deviation, flexion of the forelimb, breech presentation, dog-sitting position, and fetal monstrosities are the common fetal causes, whereas cervical nondilation is the most common maternal cause.

C) Horse

The prevalence of dystocia is higher in primiparous than in pluriparous mares. The majority of cases of equine dystocia are of fetal origin, with abnormalities of presentation, position, and posture typically outweighing fetomaternal disproportion.

Transverse presentation of the foal across the uterine body (either dorso-transverse or ventro-transverse) is well known; the transverse bicornual pregnancy, another form of transverse disposition in which the extremities of the fetus occupy the uterine horns, is notorious and peculiar to the equine species. Dystocia in which the fetus is in the posterior presentation is as likely to be in breech or bilateral hock flexion posture as they are to be in an extended posture. Unilateral forelimb flexions appear less common than bilateral flexions, whereas unilateral hindlimb flexions are uncommon. More cases of fetomaternal disproportion are due to a relatively small pelvis than an 'oversized' fetus, especially in younger, primiparous mares.

Dogs and Cats

Bitch

Fetomaternal disproportion occurs as a result of a narrow birth canal or when fetal oversize is present (usually as a consequence of low/singleton litter size). The effect of the breed: The Dachshund and Scottish Terrier are particularly prone to primary uterine inertia.

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The Corgi shows extreme variation in the size of its puppies and, hence fetomaternal disproportion may occur. The severe congenital deformities of achondroplasia and brachycephalism, which are the characteristics of some breeds, adversely affect the birth process. Brachycephalic breeds, particularly the Pug, together with the Sealyham and Scottish Terrier, are prone to obstructive dystocia due to the fetuses having comparatively large heads and the dams having narrow pelvis.

Queen

Motherly causes of dystocia are more common than fetal causes. Head flexion is the most common defective disposition associated with anterior donation. Various studies have examined the effect of breed on dystocia. correlated that dolichocephalic and brachycephalic types have a significantly advanced level of dystocia than mesocephalic types. This has been attributed to the large, wide, flat-faced head of the Persian kitten.

Conclusion

When the first or second stage of labor is protracted and aid is needed for delivery, it is called dystocia (difficult birth). Dystocia cases are stressful situations for both the mother and the child with potentially long-lasting effects. They also have a significant financial impact on farmers due to calf deaths, cow injuries or deaths, veterinary costs, the decrease in the cow's pregnancy rate following the loss of a calf, and a negative impact on the welfare of the cow and the calf. Fetal and maternal factors are to blame for it. Because first-calf heifers have not yet achieved their full size, the prevalence of dystocia varies, but generally speaking, it is more prevalent among them, and then diminishes with age. Dystocia is diagnosed based on the case history, a comprehensive clinical examination of the cow, and specialized tests such vaginal and rectal exams. Understanding normal parturition is essential for the diagnosis and treatment of dystocia, which is a significant and significant component of the science of obstetrics.

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