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FETAL ANOMALIES AND THEIR EFFECT ON PARTURITION AND THE FUTURE OF FERTILITY IN SHEEP

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Abstract:
The study was designed to determine the effect of fetal anomalies on parturition and after that on the future of fertility in sheep in Al-Muthanna province. Twenty-five ewes were used, aged between 2-5 years, and all ewes at the lambing. Dealing with lambing was performed as a hormonally, fetotomy, or surgically (caesarian section). The results show that 15/25 (60%) cases suffered from dystocia because of a different fetal anomaly. (26.6%), 4/15 cases showing a head anomaly (head oversize, eyes and mouth anomalies). (26.6%), 4 cases showing a limb anomaly (very long limbs, twisted limbs). (46.6%), 7 cases show a monster fetus (anomaly of all the fetal parts). The study showed that the fetal fluids with monster fetuses are heavy with bad odder. Obstetrical operations to dealing with these cases depend on the fetal anomaly type and general health state of the ewe. Correct the fetal maldisposition was performed in 7 cases (46.6%). Fetotomy in 1 case (6.6%). Cesarean section in 7 cases (46.6%). The study showed a (40%) of study animals showed bad fertility and decreased fertility rate due to the ewes suffering from dystocia and fetal anomalies with excessive bad odder fetal fluids. The bad fertility future was observed through the anestrous, failure of fertilization, repeat breeder, poor fluid quality, and a percentage of metritis. The study showed a decrease in fertility rate (40%) when the animals suffering from dystocia are caused by fetal anomalies and excessive bad odder fetal fluids (neglected cases).

Keywords: Fetal anomalies, fertility, sheep.

INTRODUCTION

Another known cause of dystocia in small ruminant practices is fetal monsters. Goats have a higher frequency of congenital abnormalities than sheep do (Majeed et al., 1992). The numerous occasional fetal monster instances have unclear origins. Prenatal viral infections, intrauterine exposure to toxins connected to maternal dyspepsia, gene mutations, and vitamin deficiencies such as those in vitamin A and folic acid are recognized as the key predisposing factors (Ali, 2011). Early breeding in young animals with low body weight can cause feto-pelvic disproportion, which results in a small pelvis and a normal-sized fetus. It may also happen if the fetus is larger than average compared to the animal's usual pelvis. When ewes or does are carrying a single, big fetus, this is a regular sight (Purohit and Gaur, 2011). The length of the pregnancy, fetal emphysema (Dalal and Singh, 2017), fetal anasarca (Sharun and Erdogan, 2019), hydroallantois (Laiju et al., 2012), and fetal monsters are other circumstances in which the size of the fetus rises in comparison to the pelvic size (Tripathi and Mehta, 2016).

The range of prenatal anomalies included modest single defects like a petite, cruel tail, extremity irregularities, and various problems like identical twins, cyclops, double-head fetuses, or fetuses without a neckline or head. The inherited variances are listed below in brief. Double heads, without a head, without eyes, minor eyes, erroneous eyes, a cyclops (big only one eye), undershot inferior jaw, divided lip, four mall ears, misplaced ears, a minor brain, a purse on the upper of the head, and warped face are all examples of the head. Vertebral Column: Cruel or wry-neck, without neck, cruel spine, curled spine, reduced spine, partial spine, bonded spinal column, identical twins, spinal cord overhang to the external, erroneous tail, two or three tails, condensed tail, warped tail. Forelegs: Additional legs, lost legs, condensed or "amputated" legs, prostration of the forelegs, cruel immobile limb or legs in unusual locations, longer-than-normal legs, absent hock joints, absent hooves, one hoof, a minor hoof, cruel hooves, three hooves, etc. (Dennis, 1965).

MATERIALS AND METHODS

The study was conducted in Al-Muthanna-Iraq (2022), at the period from the end of July to the end of November. The study was designed to determine the effect of fetal anomalies on the completion of parturition and the future fertility of ewes.

ANIMALS

Twenty-five ewes (n=25) were used in this study, aged between 2-5 years, and all ewes at the lambing. A case history from the owner was taken (duration of pregnancy, number of lambing, type of insemination, method of rearing, time of appearance of signs of lambing, and methods of intervention, if any). Examinations (state of the vulva, secretion, cervical dilation, lamb income) were performed.

DEALING (TREATMENT) OF DYSTOCIA

Hormonally [failure dilation of the cervix (estrogen, dexamethasone), decrease contractions with open cervix (oxytocin, calcium gluconate, multivitamins)]. Obstetrical operations (correct the maldisposition and extraction of the lambs). Fetotomy, or surgically (caesarian section).

RESULTS

The results show that 15/25 (60%) cases suffered from dystocia because of a different fetal anomaly. (26.6%), 4/15 cases showing a head anomaly (head oversize, eyes and mouth anomalies). (26.6%), 4 cases showing a limb anomaly (very long limbs, twisted limbs). (46.6%), 7 cases show a monster fetus (anomaly of all the fetal parts), figures (1,2,3,4). The study showed that the fetal fluids with monster fetuses are heavy with bad odder.

Obstetrical operations to dealing with these cases depend on the fetal anomaly type and general health state of the ewe. Correct the fetal maldisposition was performed in 7 cases (46.6%). Fetotomy in 1 case (6.6%). Cesarean section in 7 cases (46.6%), table (1).

FUTURE OF FERTILITY

The study showed a (40%) of study animals showed bad fertility and decreased fertility rate due to the ewes suffering from dystocia and fetal anomalies with excessive bad odder fetal fluids. The bad fertility future was observed through the anestrous, failure of fertilization, repeat breeder, poor fluid quality, and a percentage of metritis.

Table 1 Fetal anomalies associated with dystocia and show (obstetrical operations and fertility future)

Type of anomalies	Number of cases	Fatal fluid description	Obstetrical Operations			Future of fertility (Bad fertility)
			Correction	Fetotomy	Cesarean section	
Head anomaly	4 (26.6%)	Normal	3	1	-	2/4 (50%)
Limbs anomaly	4 (26.6%)	Normal	4	-	-	3/4 (75%)
Monster	7 (46.6%)	Heavy with bad odder	-	-	7	1/7 (14%)
Schistosoma-like anomaly	-	-	-	-	-	-
Total	15		7	1	7	

Figure 1 Head and limbs fetal anomalies in sheep

Figure 2 Head and limbs fetal anomalies in sheep

Figure 3 Anomalies of Limbs (abnormal and very long limbs) in the fetus of sheep

Figure 4 Monster (an anomaly in all the fetal parts) in sheep

DISCUSSION

The study showed that 26.6% of head anomalies (head oversize, eyes, and mouth anomalies), 26.6% of limbs anomalies (very long limbs, twisted limbs), and 46.6%) of the monster fetus (an anomaly in all the fetal parts), agree with Dennis (1965) that is show the limb malformations accounted for bulky types of the irregularities. Curved forelegs are a communal irregularity and are effortlessly recognized through their characteristic attendance. These limbs may be lengthier or quicker than usual and the situations are related to wasting the accompanying muscles. The limb deformity causes dystocia a result this study agrees with Dennis (1965) who shows that several of these lambs' deformities, for apparent details, produced problematic or pro-longed parturitions. The common of these

fetuses were born dead or died rapidly afterward the parturition. This disorder is genetic and is due to a falling deadly gene. According to this study; dealing with a case of dystocia by correction and pull of the fetus (46.6%), agree with (Roberts, 1986) which shows the primary of all alteration of mal posture was complete by revulsion of the fetus and allowance of its hock joint. The misshapen fetus was then carried by enough lubrication and mild purchase done the back extremities; the fetus died after a few minutes of parturition.

The study shows the most fetal anomalies were fetal monsters (46.6%), which agrees with (Tirpathi and Mehta, 2016) which shows the monstrous was a female fetus and completes the explanation of Prosomes horridus revealed earlier. The vertebral column was kinked and ankylosed with ventrolateral multiple curves involving cervical, thoracic, and lumbar vertebrae. Anomalies of the cranium, and or limbs in this study were (4.26%), agreeing with (Lakshmishree *et al*., 2019) that the head was also kinked; forelimbs were ankylosed relating to dorsal flexion of the fetlock joint.

CONCLUSIONS

The study concluded that fetal anomalies constitute a large percentage of dystocia in sheep. There were many forms of anomalies, including head anomalies (large head size, eye, and mouth abnormalities), limb anomalies (too-long limbs, crooked limbs), and monster fetuses (abnormalities in all parts of the fetus). The study showed that the more the fetal anomaly, the more heavy and foul-smelling fetal fluids were. Dealing with cases of anomalies because dystocia depends on the type of fetal anomaly and the general health status of the ewes (correction of the poor fetal position, fetotomy, cesarean section).

The study showed bad fertility and decreased fertility rate due to the ewes suffering from dystocia and fetal anomalies with excessive bad odder fetal fluids. The bad fertility future was observed through the anestrous, failure of fertilization, repeat breeder, poor fluid quality, and a percentage of metritis.

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