

CAUSES AND TREATMENT OF DYSTOCIA IN IRAQI AWASSI EWES

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ABSTRACT

A one hundred thirty two Awassi ewes aged between 1.5-4 years old suffering from dystocia, were brought by farmer to Veterinary Teaching Hospital related to College of Veterinary Medicine- University of Mosul-Mosul governorate- Iraq, treated during the lambing seasons for three years started from November 2010 to end of December 2012. Results of this study were recorded ring womb as main causes of dystocia, the maximum percentage was 81.8 % (108,132). The other causes of dystocia were fetal mal-position 8.3% (11,132), narrow pelvic 5.3 % (7,132), monster fetus %3.0(132,4), complicated cases (interfering more than one cause) 1.5%(2,132). although several methods of treatment have been tried, correction and manual treatment, hormonal treatment, cesarean section and fetotomy: Cesarean section had higher a positive response during treatment 61.2%, correction and manual traction recorded as second best treatment of dystocia 24.2%, hormonal treatment 12.8% and fetotomy 0.7%. It could be concluded that ringworm (maternal origin) was the major causes of dystocia in Iraqi Awassi ewes; cesarean section appears to be a safe and successful procedures for management of dystocia if performed as early as possible.

INTRODUCTION

Dystocia, or difficult birth, is a contributory factor in peri-natal death of dams and newborns because of damage to the birth canal and use of excessive traction forces (1-3).

Fetal dystocia occurred mainly due to oversize, mal-disposition, and monsters (1). Maternal dystocia were mainly due to a deficient dilatation of the cervical canal (ring womb), narrow pelvis and uterine inertia (2-3).

The mechanism of parturition depended up on hormones or tissue response to hormonal secretion, Calcium, Magnesium, Sodium and other contribute with this mechanisms, Any disturbance may be leading to dystocia if discard other mechanical causes of dystocia(4-5)

The previous reports of causes of dystocia in Awassi ewes or another breeds in last century were referred to the fetal causes as main cause for dystocia (1),(3),(6), (7),but in last year's, the studies reported that the dam reasons (ring womb) are the major causes for dystocia(8), (9).

This study was design to find out causes and safe method for treatment of dystocia in Awassi ewes the causes of dystocia under clinical condition.

MATERIAL AND METHODS

The study was conducted on 132 clinical cases of Awassi ewes were brought by farmer to Veterinary Teaching Hospital related to College of Veterinary Medicine- University of Mosul-Mosul governorate- Iraq, treated during the lambing seasons for three years started from November 2010 to December 2012.

The dystocia cases were diagnosed and treated after careful vaginal examination using aseptic techniques. Heart rate, pulse rate and rectum temperature were examined. Mutation of maldispositions and traction (obstetrical manipulations), drugs (hormones) and cesarean section were used as a method for treatment.

the survey data of the hospital were analyzed to detection the causes of dystocia, and to estimated the different methods of treatment.

Hormonal treatment was included injection of Estrogen (Vetastrol: production of Aburaihan Pharmacological Co. Tehran. Iran) in dose 2 mg/ewe for intra muscular injection: advise the farmer to bring the ewe after 72 hours, if parturition or simple form of dystocia occurred: This were considered as a good response while no response or dystocia considered as a bad results and tried to treated this cases by cesarean section.

Statistical analysis: Results were summarized as Mean. Data were analyzed using SPSS (SPSS 11.5, 2 packages, 2003, SPSS Inc.).

RESULTS

Data explain the main causes of dystocia in Iraqi Awassi ewe and total numbers of cases were summarized in table 1. The main causes of dystocia in last three years were ring womb or incomplete cervical dilatation, its ratio was higher when compare with the other causes were frequently account in total number of dystocia, the maximum percentage was 81.8% (108,132). The other causes of dystocia were fetal mal-position 8.3(11,132) %, narrow pelvic 5.3 %(7,132), monster fetus %3.0 (132,4), complicated cases 1.5% (2,132).

Table 1. Causes of dystocia in Iraqi Awassi ewes during lambing seasons in 2010-2012. Data summarized as Mean%.

Causes of Dystopia						
Years	Total cases	Ring womb	Fetal mal-position	Narrow pelvis	Monster fetus	Complicated case
2010	33	18	8	3	2	2
2011	55	50	2	1	1	---
2012	44	40	1	3	1	----
Sum	132	108	11	7	4	2
Percentage	100%	81.8%	8.3%	5.3%	3.0%	1.5%

The results of different methods for treatments are show in table 2. Cesarean section had higher a positive response during treatment 61.2%, correction and manual traction recorded as second best treatment of dystocia 24.2%, hormonal treatment 12.8% and fetotomy 0.7%.

Table 2. Different Treatment of Dystocia in Iraqi Awassi ewes. Data summarized as Mean%.

Treatment of Dystocia					
Years	Total cases	Obstetrical manipulation	Hormonal treatment	Cesarean section	fetotomy
2010	33	14	3	15	1
2011	55	14	10	31	--
2012	44	4	4	36	---
Sum	132	32	17	82	--

Percentage	100%	24.2%	12.8%	62.1%	0.7%
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DISCUSSION

Data of this study were reported ring womb (maternal causes) as a common form of dystocia in Iraqi Awassi ewes, data also referred to fetal mal-position(fetal causes) as second cause of dystocia (Table1). Failure of the cervix to dilate may be attribute to failure of secretion of the hormone that control the labor or of the tissue response to hormonal secretion and collagen fibers in the cervix may not have fully undergo their normal changes (8),(11), data of present study were agreement with another recent reports which classified ring womb as the mean cause of dystocia in Awassi ewes (8-9) but there were disagreement with an old studies done in 1980s, 1990s of last century which referred to the fetal origin as a main causes of dystocia in Awassi ewes (1),(4), this disagreement may be due to rise another predisposing factors for dystocia, environmental high temperature, climate change, low rainfall ratios leading finally to sharp decrease in animals feeding, vitamins, Feto-pelvic incomparability, hypocalcaemia and nutritional deficiency which may be play in way or another to causes dystocia (2-4).

Data of this study showed that cesarean section was best treatment of dystocia in Awassi ewes. Cesarean section appears to be a safe and successful procedures for management of dystocia if performed as early as possible. However, manual traction after correction was the second successful treatment and hormonal treatment have poor successful rate. These findings were similar to those reported by others (12-16).

The low successful rate of hormonal treatment may be due to that this type of treatment need another support factors like: onset time of parturition, type of hormone and with or without calcium, degree of cervix dilatation, severity of dystocia (9),(11) ,(17-20)

It could be concluded that ringworm (maternal origin) was the major causes of dystocia in Iraqi Awassi ewes; cesarean section appears to be a safe and successful procedures for management of dystocia if performed as early as possible.

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مسببات وعلاج حالات عسر الولادة في النعاج العواسية العراقية

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الخلاصة

أجريت الدراسة على 132 حالة سريرية من النعاج العواسية العراقية تراوحت اعمارها ما بين 1.5-4 سنة، كانت تعاني من عسر الولادة تم جلبها بواسطة المربين إلى المستشفى البيطري التعليمي التابع لكلية الطب البيطري/ جامعة الموصل- محافظة نينوى خلال مواسم الولادة لمدة ثلاثة سنوات بدأت من تشرين الثاني 2010 ولغاية كانون الأول 2012. أظهرت نتائج الدراسة أن عدم انفتاح أو التوسع الكامل عنق الرحم هو المسبب الرئيسي لحالات عسر الولادة وكانت أعلى نسبة مسجلة هي %81(132/108)، الأسباب الأخرى التي سجلتها الدراسة كانت الجبئة الخاطئة %8.3(132/11)، صغر حجم الحوض %5.3(132/7)، كبر حجم الجنين %3(4.132)، الحالات المعقدة (تداخل أكثر من سبب واحد لعسر الولادة) %1.5(132/2)، على الرغم من استخدام عدة طرق لعلاج حالات عسر الولادة شملت المناورات التوليدية، العلاج الهرموني، العملية القيصرية تقطيع الجنين، كانت العملية القيصرية انجح طريقة للعلاج وبنسبة نجاح بلغت %61.2، تلتها المناورات التوليدية بنسبة %24.2، العلاج الهرموني %12.8 ثم التقطيع الجنيني وبنسبة %0.7. (6/4، %75.0)، يمكن الاستنتاج من الدراسة الحالية إن سبب عسر الولادة في النعاج العواسية هو عدم توسع عنق الرحم (منشاه الأم) ، وأن العملية القيصرية هي أفضل طريقة لعلاج حالات عسر الولادة في النعاج العواسية العراقية إذا تم إجرائها بوقت مبكر.

REFERENCES

- 1- Taha, M.B., Majeed, A.F and Ali, J.B. Dystocia in Awassi ewes. Mesopotamia J. of Agric. 1987. 1:121-128.
- 2- Noakes, D.E., Parkinson., T.J., England, G.C.W., Arthur, G.H., 2001. Arthur's Veterinary Reproduction and Obstetrics. 8th Ed, Elsevier Sci. Ltd. P.P:216-222.
- 3- Meijering, A., 1984. Dystocia and still birth in cattle- a review of causes, relationships. Live. Prod. Sci. 11:143-177.
- 4- Majeed, A.F. and Taha, M.B., 1995. Obstetrical disorders and their treatment in Iraqi Awassi ewes. Small Rumin. Res., 17: 65-69.
- 5- Burfening, P. J., D. D. Kress, and R. L. Friedrich., 1981. Calving ease and growth rate of Simmental-sired calves. 111. Direct and maternal effects. J. Anim. Sci., 53:1210.
- 6- Roberts, S.J. 1971. Veterinary obstetrics and genital diseases. 2nd ED. Edwards brothers, Inc. Arbor, Michigan, USA.
- 7- Majeed, A. F. and Taha, M.B., 1989. Preliminary study on treatment of ring womb in Iraqi goats. Anim. Reprod. Sci., 18: 199- 203.

- 8- Ali, A.M., 2011. Causes and Management of dystocia in small ruminants in Saudi Arabia., *J. of Agric. And Vet. Sci.* 4:95-108.
- 9- Amen, A.M.F. and Ali, G.M., 2010. treatment of dystocia in karadi ewes in sulaimani province. *Bas. J. Vet. Res.*, 9:35-39.
- 10- Ghosh, A., Yeasmina, F., Alam, M.G.S., 1992. Studies of ring womb in Black Bengal goats. *Theriogenology.*, 37:527-532.
- 11- Wu, W.X., Xiao Hong, M.A., Coksaygan, T., Chakrabarty, K, Collins, K.V., Rose, J., Nathanielsz, P.W., 2004. Prostaglandin Mediates Premature Delivery in Pregnant Sheep Induced by Estradiol at 121 Days of Gestational Age. *Endocrinol.*, 145:1444–1452.
- 12- Al-Timimi, I.H., 1997. Cesarean section in ewe: causes and treatment. *The veterinarian.* 6(1) : 89-94.
- 13- -Kenneth, D and David, E., 2005. Cesarean section in cows. *Vet. Clin. Food. Anim.*, 21:73-100.
- 14- Cox, J.E., 1982. Surgery of reproductive tract in large animal. Liverpool university press. Liverpool, UK. PP:136.
- 15- Majeed, A.F., Taha, M.B. and Azawi, O.I., 1993. Cesarean section in Iraqi Awassi ewes: A case study. *Theriogenology.*, 40: 435-439.
- 16- Kisani, A.I. and Wachida, N., 2012. Dystocia due to mummified foetal monster in a yankasa ewe: a case report. *Inter. J. Animn. Vet. Adv.* 4: 167-169.
- 17- Tharwat, M., Al-Sobayil, F., Al-Sobayil, K.,2012. The cardiac biomarkers troponin I and CK-MB in nonpregnant and pregnant goats, goats with normal birth, goats with prolonged birth, and goats with pregnancy toxemia. *Theriogenology.*, 78:1500-1507.
- 18- Boland, T.M, Hayes, L., Sweeney, T., Callan, J.J., Baird, A.W., Keely, S., and Crosby., 2008. The effects of cobalt and iodine supplementation of the pregnant ewe diet on immunoglobulin G, vitamin E, T3 and T4 levels in the progeny *Anim. Con.* 2:197-206.
- 19- Bellows, R.A. and Lammoglia, M.A., 2000. Effect of severity of dystocia on cold tolerance and serum concentrations of glucose and cortisol in neonatal beef calves. *Theriogenology.*, 53: 803-813.
- 20- Yokus, B., Cakir, D., Icen, H., Durak, H., Bademkiran, S., 2010 Prepartum and Postpartum Serum Mineral and Steroid Hormone Concentrations in Cows with Dystocia. *YYU Veteriner Fakultesi Dergisi* 21: 185 – 190.