AMPUTATION OF LAST STAGE PROLAPSED UTERUS IN BARBARIAN EWE

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"الملخص

يمكن أن تشير المرحلة الأخيرة من تدلي الرحم بشكل صارخ إلى الطرد الكامل للرحم من موقعه الطبيعي إلى خارج تجويف الحوض عبر التجويف المهبلي. وأيضا ممكن وصفه تشريحيا بالانقلاب الكلي في الطبقات التشريحية للرحم وبروزها من الفرج ، ونادرًا ما تكون مصحوبة بتدلي أعضاء الحوض الأخرى لفترة زمنية.

عرض الحالة: انه في مطلع سنة 2022 تم استقبال النعجة متدلية الرحم بتحويل من العيادة الخاصة الكائنة بمنطقة جنزور الى مشفى كلية الطب البيطري جامعة طرابلس في حالة مزرية ميؤوس من شفائها تعاني من المرحلة الأخيرة من تدلي الرحم التنخري وذلك لتقييم الحالة ولإعطاء التشخيص المبدئي .

هذه النعجة كانت من الجنس البربري الأصيل ذات الصوف الطويل وذات مواصفات جمالية عالية وكذلك لكونها متعدة الولادات وكونها تلد بالأربع توائم. تم أخذ البيانات والحالة المرضية من المربي ومن تم وقع الكشف السريري للحالة والفحص المبدئي وتسجيل بعض العلامات الحيوية للحالة .

من تقييم الحالة كان الوضع سيئ جدا للغاية والإجراءات المتبعة عالميا في مثل هذه الحالات هو الموت الرحيم لأنه لا يوجد علاج نهائي لمثل هذه الحالات ولكن تم أخذ القرار بتغيير البروتوكول المتبع و كان الاجراء الأول بإنعاش الحالة من خلال محاولة إعادة جميع العلامات الحيوية الى وضعها الطبيعي والسيطرة على حالة التسمم الدموي الموجود وذلك بإعطاء مزيج من المضادات الحيوية واسعة الطيف

وكذلك إعطاء كلا من خافض للحرارة ومضاد التهاب و تقليل الجفاف الملحوظ بإعطاء سوايل وريدية مع الأخذ في الاعتبار عنصرين مهمين هما الكالسيوم والسيلينيوم تم إعطاهما تحت الجلد .

البوادر كانت مجدية في خلال أربع ساعات من الانعاش وكذلك استجابة النعجة من خلال وقوفها من غير مساعدة ومن تم وضع النعجة تحت الرعاية الطبية لمدة خمسة ايام كمرحلة اولى للعلاج .

اما بالنسبة للمرحلة التانية وهي عملية إستئصال الرحم المتعفن المتنخر بالكامل كإجراء وقائي واستمرار اعطاء العلاج السابق بعد العملية ، بعد فترة من المتابعة الطبية كانت الحالة الصحية للنعجة ممتازة وذلك من خلال النظر في الوظائف الحيوية للجسم كما رجعت ترضع توائمها الاربعة . لقد تم تناول بعض المسببات ذات الطابع التشريحي واثرها في هذه الحالة بالمقدمة وكذلك تم التطرق للعملية بالتفصيل وبعض النصايح للمربين بخصوص هذه الحالة لعدم تكرار حدوث مضاعفات وسرعة علاجها.

Abstract

Background: last stage of uterine prolapse grossly can refer to it by a complete expulsion of the uterus from its normal location to outside the pelvic cavity through the vaginal cavity. Also in terms of anatomy it can be defined of the total eversion throughout the anatomical layers of the uterus and protrudes from the vulva, rarely accompanied by a prolapse of another pelvic organs, which is suspended perineally under the anus for a good period of time. **Case presentation:** A three years old ewe pluriparous and multiparous as well, from long wool breed known locally with libyan barbary breed, was presented at the hospital clinic in hopeless case suffering from last stage of uterine prolapse with very bad situation since 10days of its normal lambing to four offspring. Physical examination and some vital signs were recorded. **Decision:** it is difficult to take decision in this situations for fearing of dying such case. First decision was to resuscitate the ewe by trying to bring all the vital signs to normal or close through controlling the enterotoxaemia and reduce septicemic chock. A mix of broad spectrum antibiotic, antipyretic, and anti-inflammatory were given, also resuscitation fluids with calcium as well selenium as subcutaneously have been administrated. 3 to 4 hours later the ewe started to respond and tried to walk up alone. Amputation has been done as second decision by take all the necrotic macerated uterus after 5 days of intensive treatment course; that mean 15 day after the parturition. **Conclusion:** last stage of uterine prolapse is an urgent state that it needs an immediate surgical intervention to avoid worst prognosis. Uterine prolapse commonly occurs within a moments to few hours after lambing

and that supposed to be an expected in case of pluriparous and multiparous ewes due to the weakness of the heavy uterus, besides the traumatic dysfunction of the different supportive ligaments in the pelvic cavity which can assist to hold that uterus in place.

Keywords: Anatomy, Ewe, Prolapse, Pelvic cavity, Uterus

Introduction

Multifactorial conditions tend to run around uterine prolapse in ewe. Generally the activation of the female reproductive system is trigger point lead to uterine prolapse. Plus most the last reports indicate that the highly productable species of ewes characterized by Pluriparous and multiparous in one season that increases risk factors to the uterine prolapse either (Rechberger, *et al.*, 2010). Also fetus size can increase probability of risk incidence of uterine prolapse in pregnant ewes (Jacobson, *et al.*, 2020), moreover the frequent exposure to physical trauma of the pelvic muscles and ligaments due to continuous parturition as well could play a major role in uterine prolapse too (Underwood, *et al.*, 2015).

Dysfunction of the anatomical structure, and the supporting system of the pelvic cavity which came up from the musculature of the pelvic diaphragm, endo-pelvic fascia and their bony attachments all of these structures could play the major role in the mechanism of uterine prolapse (Haque, *et al.*, 2005), like any tearing of levator-ani muscle; which is form a U-shaped lop around the urethra, and rectum that lead to lose the supporting mechanism during parturition (Bassett, 1965), also it keep no sealed in pelvic cavity to resists the intra-abdominal pressure during different stages of parturition (Ashton-Miller, *et al.*, 2009).

Furthermore uterine prolapse could occurs as a result of lose supportive ligaments rigidity, by lost their elasticity, that lead to no longer support to the uterus in place (Cleveland Clinic, 2019). Different Complications of labor, intra-abdominal pressure and perineal lacerations, in general all of these are also a common factors contributing in uterine prolapse directly and/ or indirectly (Memon, *et al.*, 2013). Prolapse can be incomplete or, in severe cases, can occurs completely where the uterus slips and drops outside the vulva (Kuijlaars, 2011).

Uterine prolapse may occurring within few minutes to several hours after parturition with mortality rate related directly to uterine prolapse is increased due to the following sever complication accompanied to it (Kloss, *et al.*, 2002).

Case Description

Barbarian ewe from a local valuable breed where its age about a three years old, and weighting roughly 30 kg, was submitted to the privet clinic of the university's hospital in the veterinary college of Tripoli in order to evaluation and provide the treatment of prolapsed uterus which was notice by the owner three days after she had delivered four healthy lambs. Clinically was observed that the ewe was in recumbence state with bad offensive odor of swollen, necrotic uterine prolapse and bloody oozing (Fig. 1). All though of no history of uterine prolapse in the past three deliveries. A thorough physical examination was carried out and the vital parameters were taken; temperature 40.8C°, Heart rate 127 beats/min, Respiratory rate 80 cycles/min and pulse rate 125 beats/min. congested mucus membrane was noticed, it has had loss of appetite, appear lethargy, couldn't be able to stand and walk (Fig. 1). The prolapsed uterus beside too stinky and smelly was full with dirt, macerated, showing some necrotic tissues and fully infested with maggots (Fig. 1). The definitive diagnosis was last stage of post parturient uterine prolapse and the hysterectomy was decided.

Management and supportive treatment to control both infection and the fever as a first step in our protocol to save the life of suffering ewe, by administration a mix of broad spectrum of antibiotic was received intra venous (4ml of Procaine benzylpenicillin 200mg, Dihydrostreptomycin sulphate 200mg), and antipyretic (Analgivet 500) as well intramuscularly daily for four days. The case doing well and vitally was completely active.

The second step is the complete hysterectomy to whole prolapsed uterus (Fig. 2, 3). The ewe was prepared to the operation by deprived from food 24 hours and water 12 hours before the surgery, the operation was done under general anesthesia using a mix of xylazine 0.2mg/kg I/M and ketamine 10mg/kg I/M. The prolapsed part was rinsed thoroughly using warm water and wrapped by gauze. The ewe was positioned in a lateral recumbence with hind quarter elevated up, the area around the prolapsed part was cleaned completely, and washed gently and disinfected with povidin iodine (10%). The site of the surgical incision was scrubbed by alcohol and povidin iodine. The prolapsed part

was grasped back as much as possible to reach the healthy tissue and to ensure that there is no any of other anatomical organ lodged in there. The twenty-three gauge needle and 10 ml syringe was injected through the uterine wall and aspirate to ensure that neither urinary bladder nor intestine inside the prolapsed part.

Two needles (Pins) of 20 cm long were injected through the prolapsed part to avoid the genitalia from escape backward to pelvic cavity after the amputation, and before conducting the suturing (Fig. 2). To decrease the intraoperative bleeding a couple of horizontal matters stitches were used, the first incision was longitudinal, then the transverse cut was done about 2cm away from the vulva. The surgical incision was closed with simple continues pattern using absorbable suture material. Then the needles (pins) were removed to allow the amputated portion to return to its normal location (Fig. 3). Ewe was received the rest of the antibiotic course that was given in the beginning. On the 7th postoperative day a physical examinations was conducted to the ewe, there was no missing to any stitch , and by squeezing the tissue, there was no pus comes out of the tissue, and the animal showed normal, healthy state with good appetite, with good rumination and defecation process, beside it get back to nourished her four baby lambs .

Discussion

Kahun papyri was earliest recorded on the uterine prolapse and some experimental trials of treated such a case and that was in ancient Egyptian text discussing of mathematical and medical topics in about 2000 BC, also was many fragments were discovered by Flinder Petrie since 1889, and Hippocrates as well has been described numerous of nonsurgical treatments for this condition. While in 98 BC, Soranus of Rome was the first described the amputation of the prolapsed uterus when it became black (Lensen, *et al.*, 2013).

A few reports in regard to uterine prolapse incidence rate published that nearly about 3% affecting the ewes during lambing and more than that in case of pregnant cows (Hassaneen, 2018). As mentioned in the introduction uterine prolapse may occur either immediately after lambing with an interval of 12 to 48 hours (McLean, 1956). In the first instance prolapse usually occurs as a consequence of prolonged second stage of parturition and delivery of a large and multiple offspring lambs (Sharun, *et al.*, 2019). A ewe cannot prolapse her uterus

while she still pregnant (Crilly, *et al.*, 2017). It is crucial that uterine prolapse is an emergency situation in the veterinary medicine while more than difficulty to deal with delicate and fragile tissue of prolapsed uterus. Because the tissues of uterus will easily get dried out, contaminated by feces and gets invade by bugs and can easily be injured if it gets exposed to sharp objects or stepped on fence in the stable. The most common procedure for correction of recent uterine prolapse is replaced to the normal anatomical position inside the abdominal cavity by gentle massage, reposition and retention by application of purse-string suture (Makhdoomi, *et al.*, 2015). However, most of the medical protocols adopt that the amputation in severely traumatized or necrotic uterus is the only decision can take it to safe the animal life (Fubini, *et al.*, 2004). In the present case we follow the same procedure because we were under the same circumstances.

Conclusion

When it comes to the causes of uterine prolapse there is still a lot that remains unknown. Although there are plenty of theories regarding the cause of uterine prolapse, the scientific evidence supporting these theories is frequently lacking. Newfound insight concerning the altered and dysfunctions of pelvic anatomical structures in animal suffering from a uterine prolapse, is probably the beginning of a more concrete scientific understanding of the pathology early diagnosis.

With respect of there is no treatment to the last stage of uterine prolapse always Scientists can have hope to find better alternatives. A last stage of uterine prolapse is best intervention to amputate the affected tissues as soon as possible to save the animal. Obviously in field of any since every case is unique and thus every case should be approached with an open mind and a healthy dose of logic.

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Figure. 1. The prolapsed uterus. Fully with dirt, macerated, shows some necrotic tissues and fully infested with maggots Figure

Figure. 2. Two needles (Pins) of 20 cm long localized in the prolapsed part of uterus.

Figure. 3. Amputation of prolapsed part of uterus with no bleeding, and the pin still grasped on the rest of genitalia