



Some Observation on Uterine Prolapse in Iraqi buffaloes

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Abstract:

This study was conducted on 54 Iraqi buffaloes out of 136 buffaloes suffered from partial or complete uterine prolapse (44 buffaloes) after parturition directly, during 12 hrs postpartum or 12-24 hrs postpartum and 10 Iraqi buffaloes out of 54 without uterine prolapse considered as comparative group, aged between 3-8 years old in Babylon province/ AL.Qassim city in period from 2011-2013. The affected animal were divided randomly into four groups according to the period of involution of uterus after parturition and the suitable treatment which for this period. Group1 (G1) consist of 18 buffaloes treated directly after parturition by low epidural anesthesia and replacement of the prolapse uterus followed by washing with warm distal water and lubrication with local antibiotic and systemic antibiotic (Oxytetracycline 20% 4mg.) 20ml/I.M.

Group2 (G2) (16 buffaloes) they were treated by low epidural anesthesia and prolapsed uterus supported by a towel and sprinkled with 40% glucose and suturing vulva after replacement of uterus along with oxytetracycline locally & systemically. Group3 (G3) (10 buffaloes) Using low epidural anesthesia and removal of the retained fetal membranes and suturing the wounds after washing with normal saline & hypertonic solution (40% glucose) then using antibiotics locally and systemically (oxytetracycline 20%) after that suturing the vulva.

Group4 (G4) (10 cow buffaloes) Did not suffered from uterine prolapse thus considered as a comparative groups.

The overall incidence of uterine prolapse was 32.3% (44/36). The present study was conducted to include four seasons and the incidence as follows, 25%; 25%; 31.8% and 18.2% for winter, summer, spring and autumn respectively, These percentage rates represented the percentage from infected case only, and the incidence of uterine prolapse in male births was 63.6% compared with 36.4% female births. The percentage of dystocia parturitions was 61.4% compared with 38.6% in normal parturitions, and the incidence in parity was 63.6% in multipara compared with 36.4% in primipara. The responses for different treatments were 100%, 87.5%; 88% and 100% in G1, G2, G3 and G4 respectively with superior significant differences ($P < 0.01$) for G1 and G4 compared with G2 and G3, However the first estrus after treatment was best in G4, G1 and G2 compared with G3 although G4 was record high significant differences ($P < 0.01$) compare with other groups, While the number of services per conception was similar in G1, G2 and G3, G4 recorded superiority ($P < 0.01$) compared with these groups. The pregnancy rate also was high in comparative group G4 Compared with G1, G2 and G3. also G1 and G2 was the best than the G3. Finally the days open recorded significant differences ($P < 0.01$) for G1, and then G4 and G2

compared with G3. It is concluded that the incidence of uterine prolapse in Iraqi buffaloes was higher with other reproductive diseases, the study suggested if the treatment was fast and accurate after parturition, it would give positive results reach to more than 75% of pregnancy rate.

Keywords: Buffaloes, uterine prolapse, Days open.

بعض الملاحظات على حالة تدلي الرحم في الجاموس العراقي

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الخلاصة:

أجريت الدراسة على 54 جاموسة عراقية من ضمن 136 كانت تعاني من تدلي الرحم الكامل أو الجزئي (44 جاموسة) بعد الولادة مباشرة، خلال 12 ساعة من الولادة أو بعد 12-24 ساعة من الولادة والعشرة الباقية من 54 جاموسة لم تكن تعاني من تدلي الرحم واعتبرت كمجموعة مقارنة وتراوحت أعمارها ما بين 3-8 سنوات وذلك في مدينة القاسم /محافظة بابل وللفترة 2011 وحتى 2013. الحيوانات التي كانت تعاني من هذه الحالة قسمت عشوائياً إلى أربعة مجاميع تبعا لفترة التداخل العلاجي للرحم المنقلب بعد الولادة وطريقة العلاج الملائمة لهذه الفترة.

المجموعة الأولى والتي ضمت 18 جاموسة عولجت مباشرة بعد الولادة من خلال التخدير فوق الجافية الأسفل ومن ثم إعادة الرحم المتدلي بعد غسله بالماء المقطر الدافئ وتزيتته بالمضادات الحيوية الموضعية وكذلك أعطاه مضاد جهازي من نفس النوع (الأكسي تتراسايكلين 20 %) وبجرعة 20 مل / في العضلة. أما المجموعة الثانية فقد تضمنت 16 جاموسة وعولمت بالتخدير أعلاه بالإضافة إلى استخدام محلول الكلوكوز 40% وذلك لتقليل الأود بما الموجودة إضافة إلى تزيتها وحققها بالمضاد الحياتي أعلاه وبنفس الجرعة مع خياطة فتحة الفرج. فيما ضمت المجموعة الثالثة 10 جواميس وعولمت بالمخدر الموضعي أعلاه وكذلك محلول الكلوكوز 40% والماء المقطر الدافئ إضافة إلى إزالة الأغشية الجينية المتبقية مع إزالة الجروح الناتجة عن كدمات الجزء المتدلي وكذلك تم خياطة الفرج بعد إرجاع الجزء المتدلي. أما حيوانات المجموعة الرابعة (10 جواميس) فإنها تعاني من تدلي الرحم وتركت كمجموعة مقارنة.

إن نسبة حدوث حالة تدلي الرحم كانت 33.3 % (44 / 136) وقد أجريت الدراسة الحالية على مدى الفصول الأربعة وتبين إن نسبة حدوثها كانت 25%، 25%، 31.8 %، 18.2% لفصل الشتاء، الصيف، الربيع والخريف على التوالي، وتمثل هذه النسب من مجموع الحالات المصابة بهذه الحالة، بينما نسبة حدوث الحالة في ولادات الذكور من تلك الحالات لجميع المجاميع كانت 63.6% مقارنة مع 36.4 % ولادات إناث، أما الولادات المصحوبة بعسر الولادة فقد سجلت نسبة 61.4% مقارنة مع 38.6% صاحبت الولادة الطبيعية كما إن نسبة حدوث الحالة في الحيوانات متعددة الولادة كانت 63.6% عما عليه في الحيوانات أحادية الولادة والتي كانت نسبة حدوث الحالة فيها 36.4%. الاستجابة لمختلف الطرق العلاجية سجلت 100%، 87.5%، 88% و 100% في المجاميع الأولى، الثانية، الثالثة والرابعة على التوالي وكانت هناك أفضلية معنوية بمستوى ($P < 0.01$) في المجموعتين الأولى والرابعة مقارنة مع المجموعتين الثانية والثالثة، أما ظهور أول صراف بعد العلاج فقد كان جيدا في المجاميع الأولى والثانية والرابعة مقارنة مع المجموعة الثالثة على الرغم من كون المجموعة الرابعة سجلت فرقا معنويا عاليا بمستوى ($P < 0.01$) عنه في المجاميع الأخرى. أما فيما يخص عدد التلقيحات اللازمة للإخصاب فقد أظهرت عدم وجود فرق معنوي في المجاميع الأولى والثانية والثالثة إلا أن المجموعة الرابعة (مجموعة المقارنة) فقد سجلت أفضلية بمستوى ($P < 0.01$) مقارنة بتلك المجاميع. نسبة الحمل كانت مرتفعة في المجموعة الرابعة (90%) مقارنة مع المجاميع الأخرى إضافة إلى وجود أفضلية للمجموعتين الأولى والثانية (72.2% & 78.5%) مقارنة مع المجموعة الثالثة (62.5%). وأخيراً فإن معدل الأيام المفتوحة سجل فرق معنوي بمستوى ($P < 0.01$) لصالح المجموعة الأولى ثم الرابعة والثانية مقارنة مع المجموعة الثالثة وعليه نستنتج من هذه الدراسة بأن نسبة حدوث حالة تدلي الرحم في الجاموس العراقي كانت مرتفعة مقارنة مع أمراض التكاثر الأخرى. كما يمكن الاستنتاج بأنه كلما كان علاج الحالة سريعا وبشيء من الدقة بعد الولادة يعطي نتائج ايجابية إلى نسبة حمل تقارب الـ 75%.

الكلمات المفتاحية: الجاموس، تدلي الرحم، الأيام المفتوحة.

Introduction:

Uterine prolapse is a non-hereditary complication occurs immediately after calving and up to several hours afterwards. Complete inversion of the previously gravid uterus in buffalo is a common complication of the third stage of labour and its incidence is usually affected by the seasonal and regional factors as well as parity (1, 2). Uterine prolapse is a major postpartum disorder in cattle and buffaloes. It is regarded as an emergency condition and should be managed before excessive edema, mucosal trauma, contamination and hemorrhage lead to a grave prognosis (3, 4 and 5).

The exact etiology of uterine prolapse is still unclear (6). Forced extraction of the fetus has also been incriminated as an etiological factor although incidence of prolapsed as high as 43% has been reported in buffaloes (7), while (8) reported 42.0%, Tomar & Tripathy (9) recorded about 64.8% of cases of prolapse (Cervico Vaginal), while 35.2% was uterine and mostly occurs within the first six hours after expulsion of fetus and involve a complete inversion of the gravid uterine horn. The incidence of Cervico-vaginal and uterine prolapse in river buffalo is more than in swamp buffalo (7, 10). Delayed cases may developed in fatal septicemia (11). The purpose of this study was to know the percentage of uterine prolapsed occurrence in Iraqi buffaloes and to compare treatment strategy in different time of occurrence as well as study the effect of season, sex of newborn, parity, and nature of parturition on uterine prolapse.

Materials and Methods:

This study was conducted on 54 Iraqi buffaloes out of 136 buffaloes suffered from uterine prolapse and aged between (3-8) years old in Babylon province/Al.Qassim city. Only forty four buffaloes out of the 54 suffered from uterine prolapse and 10 are without uterine

prolapse, thus considered as comparative group. These animals were divided into four groups according to the time of occurrence (directly after calving, during 12hrs postpartum and during (12-24) hrs postpartum) as well as to the method of treatment. The 1st Group (18 buffaloes) suffered from uterine prolapse was directly treated according to (12), this includes low epidural anesthesia (6ml xylocaine 2%), the usual replacement of the prolapsed uterus, followed by washing with warm distilled water and lubrication with tetracycline ointment as well as using systemic antibiotics oxytetracycline (20%) 4mg. (20ml i.v.)/I.M. The treatment for the 2nd group (16 buffaloes) that suffered from uterine prolapse during (12)hrs postpartum, included the use of low epidural anesthesia and the prolapsed uterus was supported by a towel and sprinkled with hypertonic substance of 40% glucose and suturing of the vulva after its replacement and using oxytetracycline locally and systematically. The 3rd group (10 buffaloes) suffered from uterine prolapse after 12-24 hrs postpartum was treated by using low epidural anesthesia and removal of the retained fetal membranes, suturing the wounds after washing with normal saline and hypertonic solution (40% glucose), using local and systemic antibiotics oxytetracycline, then suturing the vulva.

The 4th groups (10 buffaloes) did not suffer from uterine prolapse thus considered as a comparative group. After that the first estrus postpartum was recorded, number of insemination per-conception and days open in all groups to know the effect of the uterine prolapse on the reproductive parameters compared with comparative group (without uterine prolapse).

For analysis, data were arranged in different groups according to treatment regimes for comparison using Mean, Standard Error, Chi-Square, F. test and analysis of Variance ($P < 0.01$) (13).

Results & Discussion:

The results in table -1- showed the relationship between many factors such as seasons, sex of newborns, nature of parturition & parity that affect on the occurring of uterine prolapse in Iraqi buffaloes. The ratio of this case was 33.8% (44/130), but the effect of season on all groups was to be 31.85%, 25%, 25% and 18.2% in spring, winter, summer and autumn respectively in the treated groups while the natural parturition (without uterine prolapsed) in comparative group was 30%, 20%, 30% and 20% in the same season indicated above, These findings in agreement with (1,2 and 14). The affect of sex of newborns was recorded 63.6% (28/44%) with male calving compared with 36.4% (16/44) in female calving results are supported by (15,16).The parity was recorded to be 63.6% (28/44) with multiparous compared with 36.4% (16/44) with primiparous, while the comparative group record 40% multiparous and 60% primiparous. All these finding are in agreement by many authors'(17and18). Finally the nature of parturition was recorded 61.4% (27/44) with dystocial parturition compared with 38.6% (17/44) with normal parturition (19, 2). The results showed in table 2 reveal that response animals to different treatment according to the method of treatment and the time of occurrence of uterine prolapse was

recorded superior significant differences in G1 ($P<0.01$) and G4 compared with G2 and G3 , However the first estrous showing after treatment was 75.2 ± 9.52 , 87.4 ± 11.43 , 105.6 ± 16.26 and 53.12 ± 9.37 in G1,G2,G3 and G4 respectively and the comparative group was superior significant difference ($p<0.01$) than the other groups, the G1 and the G2 was the best compared with G3 these findings are in agreement with (14,15,16).The No. of service per conception was significantly different between treated groups but the compared group G4 record significant difference ($p<0.01$) with all treated group, and these results are supported by(9,10,15). The pregnancy rate was significancetly higher in comparative group compared with treated groups (13,14, 5,and 11), Finally the days open was recorded 133.6 ± 13.25 , 152.2 ± 18.91 , 184.6 ± 19.34 and 96.15 ± 6.45 in G1, G2, G3 and G4, also the comparative group was the best and record superior significant difference ($p<0.01$) than the treated groups with G1 being the best compared with G2& G3. G2 give high significant difference ($p<0.01$)with G3 a finding supported by (14,17 and 19). The study concluded that although the uterine prolapsed is one of the most common reproductive disease in buffaloes, early treatment can prevent the high economic losses and reproductive efficiency of animals will be well.

Table – 1 – showed the relationship between the season, sex of newborn, parity and nature of parturition with Iraqi buffaloes suffered from Uterine prolapsed.

groups	No. of animals	No. of parturition in different season				Sex of newborns		Parity		Nature of parturition	
		Winter No. %	Summer No. %	Spring No. %	Autumn No. %	Male No. %	Female No. %	Multiple No. %	Primip. No. %	Normal No. %	Dystocia No. %
G 1	18	5	4	6	3	11	7	10	8	7	11
		27.7	22.2	33.3	16.8	61.1	38.9	55.5	44.5	38.9	61.1
G 2	16	3	5	5	3	10	6	11	5	6	10
		18.7	31.3	31.3	18.7	62.5	37.5	68.7	31.3	37.5	62.5
G 3	10	3	2	3	2	7	3	7	3	4	6
		30 %	20%	30%	20%	70%	30%	70%	30%	40%	60%
G 4 without prolapse	10	2	3	3	2	5	5	4	6	2	8
		20 %	30%	30%	20%	50%	50%	40%	60%	20%	80%
total	54/136	*u.p	11	14	8	28	16	28	16	17	27
		11	25%	31.8	18.2%	63.6	36.4	63.6	36.4	38.6%	61.4%
		25% **N.	3	%	2	%	%	%	%	2	8
		2	30%	3	20%	5	5	4	6	20%	80%
		20 %		30%		50%	50%	40%	60%		
		%									

*uterine prolapse **Normal

Table -2-Reveals the animal response, first estrus after the treatment, No. of service / conception, pregnancy rates and days open in Iraq buffaloes suffered from uterine prolapse

group	No. of animals	Animal response No. %		First estrus after treatment M± SE	No. of services Per/conception M± SE	Pregnancy rate No. %	Days open M± SE
G1	18	18	100%	75.2± 9.52 a	3.22± 1.2 a	13 72.2 % a	133.6 ± 13.25a
G2	16	14	875% b	87.4 ±11.43 a	3.56 ± 0.93 a	11 78.5 % a	152 .2 ± 18.91b
G3	10	8	88% b	105.6 ± 16.26 b	3.86 ± 1.15 a	5 62.5 % b	184.6± 19.34 c
G4	10	10	100 % a	53.12 ± 9.37 c	1.62 ± 0.52 b	9 90 % c	96.15 ± 6.45 d

Different letters mean significant difference p< 0.01

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