

Post Partum Pyometra in Iraqi Goats: Clinical & Therapeutical Study

Al-Hamedawi T.M

Department of Surgery and Obstetrics / Collage of Vet Med / University of Baghdad / Iraq

Accepted on 10/7/2011

Summary

Iraqi goats (27) were used in this study .They were diagnosed clinically as cases of postpartum open pyometra (external & vaginal examination) .This study was performed in vet med /Baghdad university and two regions from Baghdad province ,their age 2-5years from 2008-2011. They were divided randomly into three groups (9goats of each group) .The 1st group treated with 250 µg of estrumate I/M injected and 2gm (10ml) oxytetracycline 20% intrauterine (I.U).The 2nd group treated with estrumate in same dose and 1tube of Metricure I.U and the 3rd group treated with estrumate and 25ml of 0.5% loguls iodine . Results showed that the number of goats responded were 77.7%, 66.6%and 88.8% in the 1st ,2nd and 3rd group respectively . The mean of the days open were 43.12±9.16,148.31±8.24 and 136.42±8.51 in the 1st ,2nd and 3rd group ,1st and 2nd group were significant P<0.01 with 3rd group (decreases) .The number of newly born kids were 32 kids (17male ,15female) . The alive were 27(84.3%) and dead 5(5.7%) .The retention of fetal membrane recorded 4/21 (19.04). In conclusion that the PGF2α (estrumate) has an effect role in the treatment of pyometra in goats and its effect increasing when combined with loguls iodine or oxytetracycline.

Key Word : Goat , PGF2α , Loguls Iodine , Metricure .

تقيح الرحم بعد الولادة في المعز العراقي : دراسة سريرية وعلاجية

طالب موسى عبدالله الحميد اوي

فرع الجراحة والتوليد البيطري / كلية الطب البيطري / جامعة بغداد/ العراق

الخلاصة

اجريت هذه الدراسة على 27 من المعز المحليه كانت تعاني من تقيح الرحم المفتوح بعد الولاده وذلك في كلية الطب البيطري / جامعه بغداد وموقعين اخرين في محافظه بغداد ، تراوحت اعمار هذه الحيوانات ما بين 2-5 سنوات قسمت عشوائيا الى ثلاثة مجاميع ضمت كل منها 9 من المعز وكان التقسيم بموجب نوع العلاج المستخدم وقد اعطيت جميع المجاميع عقار الاستروميت (بروستاكلاندين صناعي) وبمقدار 250مايكوغرام (1مل) في العضلة اضافة الى 2غم من المضاد الحياتي الاوكسي تتراسايكلين 20% (10مل) داخل الرحم للمجموعة الاولى وانبوبة واحدة من مادة (المتريكور) داخل الرحم بالنسبة للمجموعة الثانية و25مل من محلول اليود المائي وبتركيز 0.5% للمجموعة الثالثة . وقد اظهرت نتائج العلاج استجابة المعز وبنسبة 77.7% ، 66.6% و 88.8% للمجاميع الاولى والثانية والثالثة على التوالي ، فيما كان معدل الايام المفتوحة لتلك المجاميع 43.12±9.16 ، 148.31±8.24 ، و 136.42±8.51 وقد سجلت المجموعة الثالثة افضلية عن المجموعة الاولى والثانية وبمستوى معنوية 0.01 . اما عدد المواليد الكلي الناتج بعد اخصاب هذه الحيوانات

وحملها بعد العلاج فكان 32 جدي (منها 17 ذكور، 15 اناث) ، فيما سجل عدد المواليد الحية 27 (84.3%) اما الميتة فكان 5 (5.7%) . فيما كانت نسبة احتباس الاغشية الجنينية هي 19.04% وعليه نستنتج من هذه الدراسة الدور المهم للبروستاكلاندين في معالجة حالة التقيح في الماعز وزيادة هذا الدور اذا ما اقترن مع اعطاء مادة المحلول المائي لليود او الاوكسي تتراسايكلين مما يعزز في معالجة الحالة.

Introduction

Pyometra is an infectious uterine disorder and mostly common occurs after parturition in does .it characterized by the accumulation of pus in the uterus and persistence corpus luteum with absent of estrus due to failure of uterine luteolytic factor (PGF2 α) release and secondary to the sever endometritis (1 and 2).The incidence of doe pyometra was 1-10% (3 and 4).

Pyometra in does followed an acute endometritis due to difficult kidding and associated with retained placenta (5). Pyometra in caprine is characterize by accumulation of pus or mucopurulent matter in the uterus (2). In most cases of post partum pyometra the cervix is relaxed so that some of the pus escapes and observed occasionally when the doe lies down or defecates , the pus is usually thick mucoid and creamy and yellow or greenish-gray in color (1 and 4) Many treatments had been used in ewes and does (5, 6, and 7).

The aim of the study is evaluate the different treatments upon post partum Pyometra in Iraq goats. The reproductive efficiency criteria for the treated animals were : services per conception ,days open ,type of birth ,sex and viability of new born kids and retention of fetal membranes .

Materials and methods

This study was conducted in Vet. Med. Collage / Baghdad University and two other regions in Baghdad .27 does aged between 2-5 years were used in duration from 2008-2011.

Cases were diagnosed by external and vaginal examination using vaginal speculum and then divided randomly into three groups according to the type of treatment, each group include 9 does. The 1st group were treated with PGF2 α (Estrumate)* 250 μ g (1ml) injected intramuscular (I/M) and 2gm (10ml) of oxytetracyclin 20% I.U ,the 2nd group were given Estrumate 250 μ g and 1 tube of (Metricure) ** (I.U) ,the 3rd group treated with Estrumate 250 μ g (IM) and 25 ml of loguls solution. Mean and standard deviation, chi-square and T.test were conducted for analyzing the data.

*Essex Animal Health Friesoythe Sedelsberger Strasse . Germany .

** Al- Shark Veterinary Products .

Results

The results were showed in table 1 and 2. Table 1 represented the response to the treatment and showed that the treatment using Estrumate 250µg with 2gm (10ml) of 20% oxytetracycline (1st group) or with metricure (1tube) (2nd group) was effective and the response recorded 77.7% (7/9), 66.6% (6/9) respectively but the best results were achieved when Estrumate and loguls iodine 0.5% were used in the 3rd group and the response recorded 88.8% (8/9).

Table 2 showed that the open days were 143.12± 9.16 , 148.31±8.24 and 136.42±8.51 in the 1st ,2nd and 3rd groups respectively .The number of the offspring after treatment was 32 kids (17male ,15female) out of 27treated does. The nature of parturition was 18 (85.7%) for normal and 3(14.3%) represented dystocia .The alive kids were 27 (84.3%) and dead kids were 5(15.7%) from the total born kids, type of parturition were 11(52.3%) for single and 10(47.7%) for twin .Retention of fetal membranes were 4(19.04%) in the all three groups.

Table -1- Shows type of Pyometra treatment, degree of response and days open in postpartum pyometra in does.

Groups	No. of treated animals	Type of treatment	Response animals No. %	Days open M±SE
1	9	Estrumate 250µg (1ml) IM + 2gm (10ml) oxytetracycline	7 A 77.7%	A 143.12±9.16
2	9	Estrumate 250µg (1ml) IM + Metricure (1tube) IU	6 B 66.6%	A 148.31±8.24
3	9	Estrumate 250µg (1ml) IM +loguls iodine (20ml) IU	8 A 88.8%	B 136.42±8.51
Total	27	-----	21/27 77.7%	-----

*Different letters significant p<0.01.

Table -2- Reveals the effect of treatment on nature and type of parturition, sex, viability of newborn and retention of fetal membranes.

Groups	No. of animals	No. of conceived animals No. %	Nature of parturition		Type of parturition		Sex of kids		Viability		Retained of fetal memb.
			N	D	S	T	M	F	L	D	
1	9	7 77.7	6	1	4	3	6	4	9	1	1
2	9	6 66.6	5	1	3	3	4	5	8	1	1
3	9	8 88.8	7	1	4	3	7	6	10	2	2
Total	27	21/27 77.7	18 85.7%	3 14.3%	11 52.3%	10 47.7%	17 53.1%	15 46.9%	27 84.3%	5 15.7%	4/21 19.04%

N =Normal, D=Dystocia, S=Single, T= Twin, M=Male, F=Female, L=Alive, D=Dead

Discussion

The all over response was 77.7% (21/27), this response seems to be to the role of PGF2 α in evacuating the uterine contents by increasing the contractility of uterine muscles (1 and 6) and to the effect of oxytetracycline and its maintenance therapeutic levels in the uterus for 72hrs more than other antibiotics (4 and 5) this results may be related to the loguls iodine solution by releasing PGF2 α from the uterine endometrium and stimulated muscles contraction and tone (7 and 5).

The responsive rate were 77.7% ,66.6% and 88.8% in the 1st ,2nd and 3rd groups respectively and these results were in agreement with (8,9 and 10) who reported increase in does treated from pyometra with PGF2 α in various doses . The open days in the 3rd group comparable with other groups (1st and 2nd) were effective in reducing days open and increasing the response of animal to the treatment in this group , the findings of the present study for the best treatment and reducing days open are close to those reported by 5,11 and 12 . In this study concluded that the PGF2 α (Estrumate) combination with loguls iodine intrauterine infusion was effective in the treatment of postpartum pyometra in does and may be related to the role of PGF2 α in increasing the uterine contraction with rapid evacuation of contents and reducing uterine infection .

References

1. Jainudeen M R and Hafez E S E (1987).Sheep and goats .In: Hafez E S E 3rd (Ed) Reproduction in Farm Animal .Ed.Lea and Febiger, Philadelphia, P 135.
2. Roberts S J (1986).Infertility in does .In veterinary obstetrics and genital diseases (Theriogenology),3rd ed.Annarbor, Michigan. PP 669-673.
3. Singh D K Singh C S P and Singh L B (1987).Reproductive traits of Black Bengal goats: J Anim Sci 57 (6):605-608.
4. Hasnain H U (1985).Sheep and goats in Pakistan Animal production Health .FAO.56.
5. Arthur G H Noakes D E Parkinson T G and England G C (2008).Veterinary Reproduction and Obstetrics .9th ed. printed in china PP 29-30,44-45,292-298,316.
6. Kornalijnslijper J E Bevers M M and VanOord H E (1997).Induction of hydrometra in goats by means of active immunization against prostaglandin F2 α .Ani Reprod Sci ; 46:109-122.
7. Al-Hamedawi T M Al-Temmemi I H and Al-Yasiri E A (2002).Inactive ovaries in Iraqi cows :clinical &therapeutical study. Proceeding of the tenth veterinary scientific conference .220-227.
8. Ramachandran K Lyer C P N and Nair K P (1984).Pathological condition in the bursa ,salpinx and uterus of does .Kerala J vet Sci. 15: 112-117.
9. Ijapure K P Sigh B K and Chauhan R A S (2002). Incidence of pathological affections of genitalia in she goats. Indian vet J .79:298-299.
10. Zaher A R (2005).Endometritis and cystic endometrial hyperplasia in goat .J vet Diagn. Invest. 17:393-395.
11. Whitley N C and Jackson D J (2004).An update on estrus synchronization in goats: a minor species .J Anim Sci.82:270-276 (proceedings).
12. Kennedy P C and Miller R B (1993).The female genital system .In: pathology of domestic animals, ed. Jubb K V F Kennedy P C and Palmer N. 4th ed. PP 374-385. Academic Press. San Diego, CA.