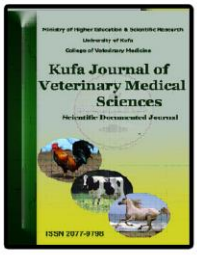
Kufa Journal for Veterinary Medical Sciences Vol.(6). No.(2) 2015

Kufa Journal for Veterinary Medical Sciences
vetmed@uoKufa.edu. iq



Treatment of retained fetal membranes in dairy cows

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Abstract

Treatments of retained fetal membranes in dairy cattle. The study was conducted on 100 dairy cows of Friesian-Holstein breeds suffering from retained fetal membranes, presented in Al-Fayhaa station, at Gabala, Musaib-Babel. The age of animals ranged from 4-8 years. The animals were divided into four equal groups, each groups contain 25 cows.The first group were treated with 22,5mg of PGf2 I.M, The second group treated with 100 i.u of oxytocin i.m. The 3rd group was treated with 50 i.u. of oxytocin .while the fourth group treated with 5mg estradiol benzoate i.m. The animals were under observation within 72 hours after treatment, to follow expulsion of fetal membranes.

The results showed that treatment with PGf2 with a dose of 22.5 m.g.i.m. give the best results with efficacy of 100% (25\25), followed by treatment with 100i.u. of oxytocin with efficacy of 72% (18\25).

While the 3rd and 4th group treatment showed a poor response with efficacy of 48% (12\25) and 40% (10\25) respectively.

There was a significant difference ($P<0.05$) between PGf2 treated group and other groups, It was concluded that treatment of R.F.M. with PGF2 give the best results.

علاج احتبـــاس الأغشيـــة الجنينيـــة في الأبقـــار

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الخلاصة:

أجريت الدراسة على 100 بقرة من سلالة الفريزيان -هولشتاين الحلوب ,مصابة باحتباس الأغشية الجنينية, تواجدت في محطة الفيحاء في منطقة الجبلة, التابعة لقضاء المسيب بمحافظة بابل تراوحت أعمارها بين 4-8 سنوات.قسمت الحيوانات إلى أربع مجاميع متساوية كل مجموعة اشتملت على 25 بقرة.

عولجت المجموعة الأولى بإعطائها 22.5 ملغم من البروستاكلاندين PGF2α بالعضل وعولجت المجموعة الثانية بإعطائها 100 وحدة دولية اوكسيتوسين بالعضل وعولجت المجموعة الثالثة بإعطائها 50 وحدة دولية اوكسيتوسين بالعضل أما المجموعة الرابعة فعولجت بإعطائها 5 ملغم من الاستراديولبنزويت بالعضل تم متابعة الحالات لملاحظة طرح المشيمة بعد العلاج ولمدة 72 ساعة أظهرت النتائج إن أفضل العلاجات كان باستخدام البروستاكلاندين PGF2α وبجرعة 22.5 ملغم وبكفاءة 100%(25\25) يليها استخدام الاوكسيتوسين وبجرعة

100 وحدة دولية وبكفاءة 72%(18\25) أما المجموعة الثالثة والرابعة فكانت كفاءتها 48%(12\25) و40%(10\25) على التوالي .
لوحظ وجود فرق معنوي($P<0.05$) بين مجموعة البروستاكلاندين PGF2α والمجاميع الأخرى.
وقد استنتج من الدراسة إمكانية استخدام البروستاكلاندين PGF2α في علاج احتباس الأغشية الجنينية وبكفاءة عالية.

Introduction:

Retention of fetal membranes (RFM) is a Common post partum problemes in cows . It was defined as a failure of detachment of fetal membranes within 12-24 hours after parturition (1) . The incidence of the condition ranged between 5_50% (2) . The main cause of RFM might be due to in ability of chorionic villi to detached from maternal coruncles (3) . There are several factors affects or predispose to Retained Fetal membranes ; These factors includes ; Age , breed , gestation period , uterine inertia , hypo calcemia , Dystocia , uterine infection and hormonal disturbances (4) . The mortality rate due to RFM were reported to be from 1_4% (5) ,white complications accompanied RFM includes; Metritis and pyometra that leads to infertility (1,3,6). There are several methods used for treatments of retained fetal membranes . These methods includes ; manual removal , intra uterine infusion with antibiotics or lugol's Iodine solution , system is treatment with antibiotics , and the hormonal therapy with estrogen , oxytocine and prostaglandin F2α(PGF2α). The aim of this study was designed to investigate the effect of PGF2α , oxytocine indifferent doses and estrodiol benzoate on treatment of retained fetal membranes in dairy cows

Materials And Methods

The study was conducted on 100 dairy cows of Friesian-Holstein breed suffering from retained fetal membranes , presented in AL_Fayhaa station at Gabala , Musaib which Delongs to Babel Gorvernerate . The age of animals ranged from 4_8 Years . The animals were fed on green fooder and concentrate . The animals were divided into four equal groups , each group contain 25 cows .The first group were treated with 22.5 mg of prostaglandin F2α intramuscular (I.m.) . The second group treated with 100 I.u. of oxytocin I.m. The third group was treated with 50 I.u. of oxytocin I.m. while the fourth group treated with 5mg estradiol benzoate I.m. The animals were put under observation within 72 hours after treatments , follow expulsion of fetal membranes and the response to each treatment . chi- square test were used for statistical analysis (7) .

Results And Discussion

Table _1_ shoused the effects of different hormonal treatments on retained fetal membranes in dairy cows .

groups	Methods of treatments	No.of animals	No.of response	Efficacy%
1	prostaglandin F2α 22.5 I.m	25	25	100%a
2	Oxytocin 100 I.u. I.m	25	18	72%b
3	Oxytocin 50 I.u. I.m	25	12	48%c
4	estradiol benzoate 5mg I.m.	25	10	40%a

There was a siqnificant difference ($P<0.05$) between different letters .

From table -1- it has been observed that prostaglandin F2α in adose of 22.5mg I.m. give the best results with an efficacy of 100% in expulsion of the fetal membranes . There was a significant difference between the first group ($P< 0.05$) and other treated groups . Similar observations have been reported by several authors (4,8,9,10) . The effects of PGF2α on expulsion of fetal membranes might be due to their role on diltation of the cervix and increase uterine muscle contraction (3,11,12) .

The results were confirmed by Majeed et al . (4) and Gross et al . (13) whom observed that one injection of PGF2α postpartum wit in one hours or several hours leads to reduce the incidence of RFM especially in induction of parturition or in a farms with high incidence of RFM . while the second treated group (oxytocin group 100 I.u.) showed a response of 72% .

It has been Known by many researchers that oxytocin espacially if it is given in high dose as in this group leads to increase uterine muscle contractions and increase myo epithelial basket cells contreaction which leads to expulsion of fetal membranes and increase the rete of uterine involution and milk let _ down (3,4,10) There was a significant difference (P<0.05) between this group and other treated groups .

The third group treated with 50 I.u. oxytocin with an efficacy of 48% (12/25) . The use of oxytocin in this dose as a prophylactic dose to prevent their occurence in most of the condition (1,14) . The low response in this group might be due to decrease numbers of receptor side of oxytocine in uterine muscluture which might be due to decrease secretion of estrogen that increase receptor side of oxytocine in uterine endometrium (15) .Similar observations have been made by several workers (1 , 12) . There was a significant difference (P< 0.05) between this group and other treated groups .

The fourth group (Estradiol ben zoate 5mg) showed the lowest response (40%) . This might be due to that estrogen dilate the cervix only (1) . It has been observed that the use of estrogen in large amount leads to increase myometrial activity , phagocytosis and immune response (5 , 16 , 17) . There was asignificant difference (P<0.05) between this group and other treated groups . It has been reported that the use of long _ acting estrogen may have a side effects leads to inflammation of uterine tubes and formation of cystic ovaries which due to unknown causes (18) .

It was concluded from this study that the use of PGF2α in adose of 22-5 mg I.m. give the best results in treatment of retained fetal membranes in dairy cows as compared with other hormonal treatments especially if there was no systemic reaction .

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