

Effect of Oxytocin and Cofecu on Post Insemination conception rate in repeat breeder cattle on subsequent time interval

D.Mahto, B.Singh, A. Adil and R.K. Verma

Department of Animal Reproduction, Gynaecology and Obstetrics,
Ranchi Veterinary College, Kanke, Ranchi - 6, Jharkhand.

Abstract

Fifty cross bred repeat breeder cattle belonging to farmers from different villages around the Veterinary College during the period from January 2006 to December 2006 were divided into five group. All animals were between 3 and 6 year. All groups treated with Oxytocin 4 ml I.M. single dose and Cofecu (Natural Remedies, India) 4 tablets b.i.d. PO for 4 day after insemination of different time intervals. There was an improvement in conception rate with Oxytocin and Cofecu administration on 4 and 5 hr. post insemination (80%) when compared to that of control animal (20%).

Keywords: Oxytocin, Post insemination, Conception, Repeat Breeder.

Introduction

Repeat Breeding is the most common reproductive disorder in cattle both at organised as well as in field condition. The exact cause of repeat breeding is still an enigma in many cows and hence termed as idiopathic or unexplained infertility. Still, fertilization failure and embryonic mortality are the two major factors affecting the fertility of females (Roberts, 1971).

The objective of the present study was to evaluate the effect of oxytocin and cofecu post insemination on conception rate in repeat breeder cattle on subsequent time intervals.

Material and Methods

Fifty cross bred repeat breeder cattle belonging to farmers from different villages around Ranchi Veterinary College during the period from January 2006 to December 2006 were included in

the trial. The animals were between 3 and 6 year age. The animals were included in the trial which were recorded by taking history, physical appearance, rectal finding of individual, apparently normal, healthy and free from obvious genital diseases.

All animals were randomly divided into five group each of ten. All group except control were treated with oxytocin @ 4 ml I.M. single dose and Cofecu, 4 tablets b.i.d. daily for 4 day after insemination at different time intervals i.e. 1,2,3,4 and 5 hour. and controlled group untreated. All animals were diagnosed per rectal between 45-60 days post insemination.

Results and Discussion

The effect of different therapeutic protocols on conception rate in repeat breeder cow was improved with oxytocin and cofecu administration

Table.1 Oxytocin and Cofecu administration and dosage schedule in different groups.

Groups	Time interval	No. of Animals	Drugs	Route	Dose
I Control	1 Hour	10	No Treatment	----	----
II (T1)	2 Hour	10	Oxytocin and Cofecu	I.M. and Oral	Oxytocin @ 4 ml and Cofecu 4 tab. b.i.d. for 4 days
III (T2)	3 Hour	10	Oxytocin and Cofecu	I.M. and Oral	Oxytocin @ 4 ml and Cofecu 4 tab. b.i.d. for 4 days
IV (T3)	4 Hour	10	Oxytocin and Cofecu	I.M. and Oral	Oxytocin @ 4 ml and Cofecu 4 tab. b.i.d. for 4 days
V (T4)	5 Hour	10	Oxytocin and Cofecu	I.M. and Oral	Oxytocin @ 4 ml and Cofecu 4 tab. b.i.d. for 4 days

Table.2 Conception rate in repeat breeding cows following treatment.

Groups	Time interval	No. of Animals	No. of Animal conceived	Conception Rate
I Control	1 Hour	10	2	20
II (T1)	2 Hour	10	3	30
III (T2)	3 Hour	10	4	40
IV (T3)	4 Hour	10	8	80
V (T4)	5 Hour	10	8	80

on 4 and 5 hour post insemination (80%) as compared to that of control animal (20%). Vandemark and Hays (1954) reported that in the intact animal 2-4 minutes after A.I., administration of oxytocin causes uterine motility as produced by natural mating. The animals in heat are nervous and excited and are put on stress while Artificial Insemination is done. This leads to liberation of epinephrine. Epinephrine causes relaxation of

estrogenic uterine muscle, thus affecting the sperm transport and fertilization rate (Hay and Vandemark,1952).

References

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Researchers probe pandemic potential of H9N2 virus

Scientists have warned it's impossible to predict which avian influenza virus will spark the next pandemic, and while most of the attention has been on highly pathogenic H5N1, one research group is reporting new findings that raise concerns about the threat from the low-pathogenic H9N2 virus. The international group of researchers, mainly from the University of Maryland, published their findings in the August issue of *PLoS One* (*Public Library of Science One*). They used ferrets, which have sialic acid receptors in their respiratory tracts resembling those in humans, to explore how H9N2 viruses replicate and transmit. The H9N2 subtype has been found in many avian species in Asia, the Middle East, Europe, and Africa over the past decade, the authors write. The virus can cause mild-to-moderate disease in humans. The *PLoS One* report says that many H9N2 isolates have acquired human virus-like receptor specificity, preferentially binding alpha 2-6 sialic acid receptors. The authors write that three other factors also fuel concerns about the potential of H9N2 to evolve into a pandemic strain. Some studies have shown that H9N2 viruses extensively evolve and reassort, while others have shown that the viruses have spread to pigs, which could provide a "mixing vessel" with influenza viruses that are more likely to infect humans. Also, serologic studies have suggested that there may be more human cases of H9N2 than have been detected and reported so far. Therefore, avian H9N2 viruses are in an ideal position to undergo further adaptation for more efficient transmission among mammals and humans," they write. The authors write that the results suggest H9N2 infections in ferrets are similar to those in humans and pigs.

Wan H, Sorrell EM, Song H, et al.: Replication and transmission of H9N2 influenza viruses in ferrets: evaluation of pandemic potential. *PLoS One* 2008 Aug;3(8):1-13 [Full text <<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0002923>>]

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