

NOTE :
INDUCTION OF PARTURITION IN ANGORA RABBITS
BY OXYTOCIN : SOME OBSERVATIONS

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ABSTRACT : The effect of oxytocin to induce parturition in angora does was studied. Retrospective observations were made on pregnant angora does maintained under ideal thermal and photo regulation and hygienic conditions. They were divided into two groups ; Group I (18 does), where oxytocin was used to induce parturition and Group II (8 does), where no oxytocin was used. To induce parturition, oxytocin (Sandoz®) 1 ml was injected intramuscularly on the 29th and 30th days

of pregnancy. Parturition occurred in 8 of the 18 does between 12 and 30 minutes after injecting oxytocin. The 10 does did not respond to oxytocin and delivered kits only after two to three days. It was concluded that oxytocin could induce parturition safely without side effects in does where the gestation period was nearly complete and failed to do so in those that still had a time gap of about two days

RESUME : Note – Induction de la mise bas chez la lapine angora avec de l'ocytocine. Quelques observations. L'effet de l'ocytocine pour provoquer la mise bas a été étudié chez la lapine angora. Les lapines gestantes observées ont été maintenues dans les conditions optimales de température, d'éclairage et d'hygiène. Elles ont été divisées en 2 groupes. Dans le groupe I (18 lapines) l'ocytocine a été utilisée pour provoquer la mise bas tandis que dans le groupe II (8 lapines) elle n'a pas été utilisée. L'ocytocine (Sandoz®) a été administrée par injection intramusculaire aux 29^{ème} et 30^{ème} jours de

gestation. La mise bas n'est survenue que chez 8 lapines sur 18, entre 12 et 30 minutes après l'injection. Les 10 lapines restantes, ne réagissant pas à l'ocytocine, n'ont mis bas que 2 ou 3 jours après. L'influence de l'ocytocine sur différents paramètres des performances de reproduction a aussi été étudié. On peut déduire que l'ocytocine peut provoquer la mise bas sans risques et sans effets secondaires lorsque la gestation est proche de son terme mais qu'elle est sans efficacité si l'injection est faite 2 jours ou plus avant le terme normal

Oxytocin is the most potent uterotonic agent that induces contractions of the myometrium and is occasionally used in inducing lactation and hastening normal parturition provided the cervix is dilated (FRASER, 1986). However, it has been reported that circulating oxytocin appears not to participate in the induction of parturition. LEFEBVRE *et al.* (1992) suggested that oxytocin acts as a local mediator of parturition rather than a circulating hormone.

In the present investigation, effect of oxytocin to induce parturition in angora does was studied. This is a retrospective in which oxytocin was used to induce parturition in randomly selected does. The pregnant does were divided into two groups: Group I (18 does) in which oxytocin was used to induce parturition and Group II (8 does), where no oxytocin was used. The pregnant does were maintained under balanced feed, with *ad libitum* clean water in well ventilated cages with proper thermal and photo regulation and hygienic conditions. Pregnancy was confirmed by palpating the abdomen on the sixteenth day post-mating. In doubtful cases radiography was done. To induce parturition, 1 ml oxytocin (Sandoz®) was injected intramuscularly on the 29th and 30th days of pregnancy.

Parturition occurred in 8 of the 18 does between 12 to 30 minutes after injecting oxytocin. The remaining 10 does did not respond to oxytocin and delivered kits only after two to three days. Only two of 10 does that did not respond to oxytocin showed nesting behaviour. Of the

eight does that responded to oxytocin, five exhibited signs of nervousness during kindling.

In does where oxytocin was not used to induce parturition, most kindlings occurred in the morning. Most of the does exhibited signs of nesting behaviour one or two days before kindling. Two of eight does that kindled naturally showed cannibalism, whereas all does that kindled ate the foetal membranes.

Litter size in both the groups varied from 3 to 8 kits. Despite best possible efforts and management practices, an average of only three kits survived per doe. In group II, four does were overdue and delivered 17 kits on the 33rd and 34th days. Only six kits from these overdue females survived. Five were born dead and six died within one day post kindling. Hence it was noted that there was a high incidence of mortality in litters of overdue females. Of the 10 does in group I which did not respond immediately to oxytocin injection, 8 delivered kits on the 31st and 32nd days. The remaining two were injected intramuscularly with 1 ml oxytocin on day 33. A total of nine kits was delivered of which seven survived; thus reducing kit mortality in these overdue does.

From this study, it was concluded that oxytocin could induce parturition safely without side effects in does where the gestation period was nearly complete and failed to do so in those that still had a time gap of about two days. Oxytocin played a dual role by safely terminating pregnancy in full term or overdue females.

Dead foetuses in some cases may have been responsible for failure of normal parturition and induction did prevent further complications such as mummification and maceration.

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