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EFFECT OF UTERINE PALPATION ON ESTROUS CYCLING  
BRAHMAN COWS AND HEIFERS

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SUMMARY

Uterine palpation was administered on days 8, 12 and 16 of the estrous cycle to Brahman cows and heifers. Neither blood concentration of prostaglandin nor length of the estrous cycle were affected. Uterine palpation, when performed during the estrous cycle, will not have a deleterious effect on either cows or heifers through a release of prostaglandin.

INTRODUCTION

It is well known that an injection of prostaglandin during the last two-thirds of the estrous cycle will shorten the length of the estrous cycle and effectively abort any pregnancy which may have occurred at the previous estrus. Previous studies conducted here have shown that uterine palpation, when administered 35 days after calving, can cause a release of prostaglandin. This prostaglandin release is not harmful and is probably beneficial to the early postpartum cow. It would be important to determine if uterine palpation during the estrous cycle can cause a release of prostaglandin, since injections of prostaglandin at this time will shorten the estrous cycle.

PROCEDURES

Twelve Brahman heifers and twelve Brahman cows were used in this experiment. Three separate groups of four heifers and four cows each were used on days eight, twelve or sixteen of their estrous cycles, respectively. Each animal was assigned to either serve as a control or to receive two minutes of uterine palpation during one estrous cycle and then was placed in the other group during the following estrous cycle. If a cow or heifer received uterine palpation during her first estrous cycle she was a control on her next estrous cycle. Cows and heifers were fitted with a jugular cannula for the removal of blood samples. On the appropriate day, blood samples were collected every ten minutes for thirty minutes prior to uterine palpation with collection continuing at ten minute intervals for 120 minutes after

palpation. Blood sampling then occurred every twenty minutes for an additional three hours after palpation. Blood was analyzed in the laboratory for prostaglandin content. The average of the prostaglandin concentrations in the four samples taken before palpation were subtracted from the prostaglandin concentration in each blood sample taken after palpation. This indicated how much prostaglandin was released as a result of uterine palpation.

#### RESULTS

Uterine palpation, when performed during the last two-thirds of the estrous cycle has no effect on the blood levels of prostaglandin (Figures 1, 2 and 3). The length of the estrous cycle (21.3 days for control estrous cycles; 21.8 days for uterine palpation estrous cycles) was not affected by uterine palpation. Cows and heifers can undergo uterine manipulation during the last two-thirds estrous cycle without experiencing a rise in blood levels of prostaglandin.

Figure 1

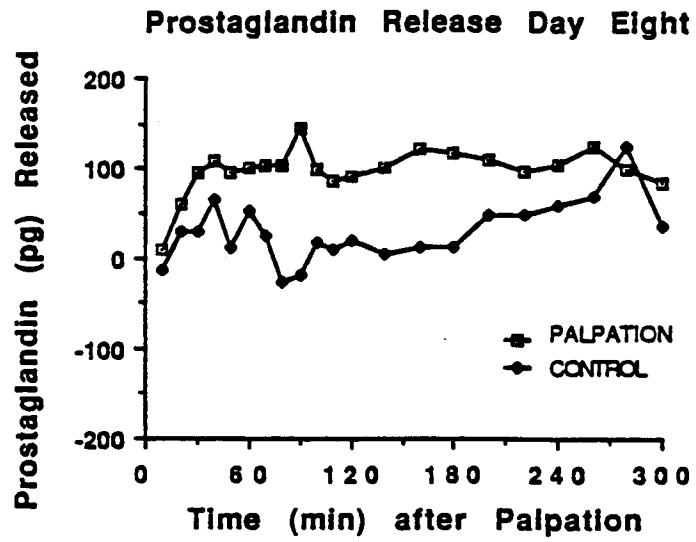


FIGURE 2

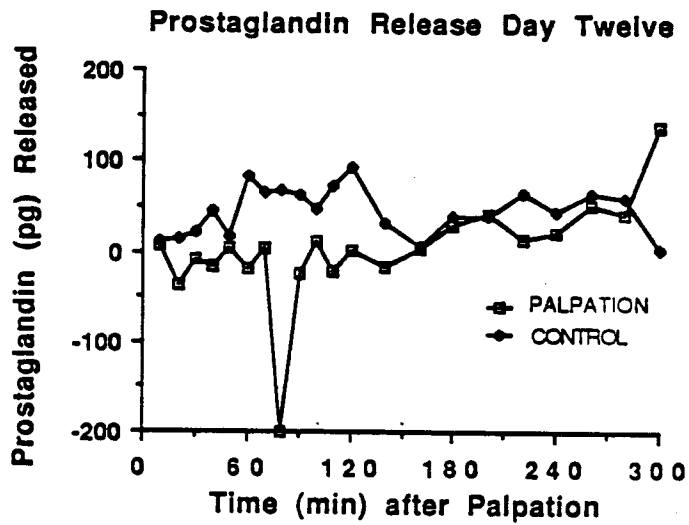


FIGURE 3

