

In vitro study on the susceptibility to *E. coli* adhesion in ewes during the follicular and luteal phases of the estrous cycle.

ABSTRACT

The present study examined the susceptibility of uterine mucosa of ewes under the influence of estradiol and progesterone to *E. coli* adherence and colonization in vitro. Uterine explants were collected during the follicular and luteal phases of at peak levels of estrogen and progesterone respectively. Samples were inoculated with 10⁸ cfu of *E. coli* culture. Serial sampling of the uterine explants of both phases were done at 45, 90, 180 and 360 min post-inoculation. The samples were processed for scanning electron microscopic examination. The results revealed that bacterial colonization on the uterine explants during follicular phase was significantly lower ($p < 0.05$) than during the luteal phase. Maximum colonization was observed at 360 min post-inoculation for both the follicular and luteal phases. Bacterial colonization on the luteal phase uterine explants was more severe than that of the follicular phase and it seems to increase with time.

Keyword: In vitro; *E. coli*; Follicular; Luteal; Ewes.