

The effects of PGF2 α and CIDR on ovarian antral follicular development and plasma IGF-1 concentration in goats.

ABSTRACT

The aim of this study was to determine the effects of oestrus synchronization with PGF2 α , and CIDR on the ovarian antral follicle population and plasma IGF-1 concentration in goats. Daily transrectal ultrasonographic examination was conducted in 24 regularly cycling goats that were divided equally into 3 groups and oestrus synchronized with PGF2 α , (group A), CIDR (group B) and unsynchronized group (C). The mean number of follicles and IGF-1 concentration was significantly higher in the synchronized and subsequent natural oestrous cycles of group A and B when compared to group C. The total number of 3mm diameter follicles were significantly higher in groups A and B compared with the control group C while the follicles that were 6mm and larger were not significantly different ($p>0.05$). There was a significant low positive correlation ($r = 0.14$, $N = 234$) between IGF-1 concentration and the number of 3mm follicles and between plasma IGF-I concentration and number of follicles ($r = 0.13$, $N = 234$). In conclusion, oestrus synchronization with PGF2 α , or CIDR was associated with increased plasma IGF-1 concentration and number of follicles compared with naturally cycling goats.

Keyword: Oestrus synchronization; Ultrasonography; CIDR; PGF2alpha; Follicular development; IGF-1; Goats.