

## **Changes in the reproductive hormones of non-pregnant does infected intradermally with corynebacterium pseudotuberculosis in chronic form**

### **ABSTRACT**

Corynebacterium pseudotuberculosis is the causative agent of caseous lymphadenitis (CLA), a common disease in small ruminant populations across the globe. The disease remains as a major disease causing economic loss to the owners. There is little information related to the effect of this disease towards reproductive performance of the animal when the disease occurs in chronic form. This study analyzes the changes of the reproductive hormones in non-pregnant does infected chronically with Corynebacterium pseudotuberculosis via intradermal route. Eighteen non-pregnant healthy Katjang does aged 2 years old were divided randomly into two groups. The first and second groups consist of nine does each and were kept for 3 consecutive months. The first group was experimentally inoculated with 1 ml of  $10^7$  cfu of live Corynebacterium pseudotuberculosis through intradermal route while the second group was inoculated with 1 ml PBS (pH 7) solution intradermally. Serum samples were collected every 3 days for 3 consecutive months from each group post infection via jugular venipuncture for reproductive hormone analyses. Present study indicates a decrement in progesterone concentration but shows an increment in estradiol profile throughout 3 months post-infection. The present results therefore indicate hormonal imbalance due to chronicity of Corynebacterium pseudotuberculosis in affected does.

**Keyword:** Corynebacterium pseudotuberculosis; Progesterone level; Estrogen level; Intradermal route; Non-pregnant goats; Chronic form