Reproductive pathological changes associated with experimental subchronic corynebacterium pseudotuberculosis infection in nonpregnant boer does

ABSTRACT

Corynebacterium pseudotuberculosis causes caseous lymphadenitis (CLA), which is a contagious and chronic disease in sheep and goats. In order to assess the histopathological changes observed in the reproductive organs of nonpregnant does infected with the bacteria, 20 apparently healthy adult Boer does were divided into four inoculation groups, intradermal, intranasal, oral, and control, consisting of five goats each. Excluding the control group, which was unexposed, other does were inoculated with 10(7) CFU/1 mL of live C. pseudotuberculosis through the various routes stated above. Thirty days after infection, the ovaries, uterus, and iliac lymph nodes were collected for bacterial recovery and molecular detection, as well as histopathological examination. The mean changes in necrosis, congestion, inflammatory cell infiltration, and oedema varied in severity among the ovaries, uterus, and iliac lymph nodes following different inoculation routes. Overall, the intranasal route of inoculation showed more severe ($p < 0.05$) lesions in all the organs examined. The findings of this study have shown that C. pseudotuberculosis could predispose to infertility resulting from pathological lesions in the uterus and ovaries of does.

Keyword: Reproductive pathological; Subchronic corynebacterium pseudotuberculosis infection; Nonpregnant boer