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P82- CYTOKINE AND INFLAMMATORY MEDIATORS EXPRESSION IN INTESTINAL TISSUES OF LAMBS SHOWING DIFFERENT TYPES OF LESIONS IN EXPERIMENTAL PARATUBERCULOSIS.

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Introduction: Animals infected with Mycobacterium avium subspecies paratuberculosis (Map) show a variety of lesions, from focal, persistent lesions, up to diffuse forms. It has been proposed that the local immune response mounted against Map in the intestine could play a role in the development of the lesions. This study investigates the expression of cytokines and other inflammatory mediators, measured by qPCR, in tissues from lambs experimentally infected with Map.

Materials and Methods: Tissue samples (distal ileum, jejunal Peyer´s patches, mesenteric lymph node) from 14 lambs (11 infected with Map and 3 controls) were examined by histopathological methods. The same samples were assayed by qPCR for the determination of the expression of the following genes: Th1 response (TNF-α, IL-12, IFN-γ, IL-1β, IL-6), Th2 (IL-13, IL-4, IL-10), Th17 (IL-17), TLR-2 innate immune response receptor, FoxP3 transcription factor, and urocortin (UCN).

Results: Although a great individual variability was found, differences were seen in some gene expression: IL-10 levels were higher in lambs with the more severe lesions in the distal ileum; IFN-γ expression increased in tissues from infected lambs that did not show lesions; lambs with diffuse lesions had a lower IL-1β expression; IL-3 levels were higher in lambs with focal lesions; UCN expression was higher in lambs with focal and multifocal forms.

Discussion &Conclusion: This study confirms the high complexity of paratuberculosis pathogenesis. Some lesional forms are associated with changes in several cytokine and inflammatory mediators expression.

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