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Veterinarni Medicina

Detection of Visna Maedi virus in mesenteric lymph nodes and in other lymphoid tissues of sheep three years after respiratory infection

Preziuso S, Magi GE, Mari S, Renzoni G:

Veterinarni Medicina, 58 (2013): 359-363

[fulltext]

Visna/Maedi virus (VMV), a small ruminant lentivirus responsible for lymphoproliferative pneumonia, encephalitis, arthritis and/or mastitis in sheep, has been detected in different non-lymphoid organs. However, only a few investigations have been carried out in lymphoid tissues. In this study, some lymphoid tissues and lymph node draining or non-draining VMV target organs from five sheep infected experimentally by the respiratory route three years previously were investigated. Archival samples of spleen, red bone marrow, caudal mediastinal lymph nodes, mammary lymph nodes, popliteal lymph

tested by PCR for the presence of proviral DNA. Popliteal and mesenteric lymph node samples were tested also by immunohistochemical staining of the viral capsid antigen p28. The proviral DNA was detected by PCR in all the lymphoid tissue samples from the infected sheep. The viral antigen was stained in mononuclear cells in popliteal and mesenteric lymph nodes of the infected sheep. Although the lymph nodes draining the classical target organs seem to be more infected than the others, both the viral capsid antigen and the proviral DNA were present also in lymph nodes draining non-target organs, such as the mesenteric lymph nodes. These findings show the presence of VMV in different lymphoid tissues in the late stages of infection and suggest a potential role of these tissues as a site for viral reservoir and replication, even three years after infection.

Keywords:

Visna/Maedi virus; sheep; lymphoid tissue; immunohistochemistry; PCR;

experimental infection

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