

TITLE

ORGANIC DISSEMINATION OF MYCOBACTERIUM TUBERCULOSIS COMPLEX AND TUBERCULOSIS LIKE LESIONS IN FREE-RANGE PIGS

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CONTENT

Background and Objectives

Tuberculosis like lesions (TBL) remains as one of the main causes of condemnation in swine reared in outdoor systems with mycobacteria belonging to Mycobacterium Tuberculosis Complex (MTC) as one of the principal etiologic agents. Therefore, the incidence and organic dissemination of these microorganisms in TBL from free-ranged pigs was evaluated in this study.

Material and methods

Two-hundred-sixty-two samples from 37 totally condemned pigs were analysed: submandibular (SLN, 37), superficial inguinal (SILN, 37), gastrohepatic (GHLN, 36), and popliteal (PLN, 36) lymph nodes, lungs (37), liver (34), spleen (24) and tonsils (21). Histopathological analysis was carried out and granulomas were classified into four stages (I-IV). MTC was tested from tissue by duplex qPCR.

Results

A total of 172 samples from 27 animals were subjected to histopathological examination. Two different patterns were evidenced with lack or occasional lesions in SILN and PLN and advanced lesions detected in SLN (26/27) and GHLN (23/25) (stages III and IV). Early stage granulomas (stage I and II) were the predominant lesions in lungs (13/16), liver (12/22) and spleen (7/14).

MTC was detected in 31 out of 37 animals and 90 (90/262) samples. In 26 out of the 31 pigs, MTC was detected from two or more organs. SLN (24/31) and GHLN (19/31) were the MTC+ organs most frequently detected, with 29 out of 31 MTC+ pigs detected as positive in one or both of these samples. MTC were also detected from spleen (9/31), SILN (11/31), liver (8/31), lungs (8/31) and tonsils (4/31).

Discussion and conclusion

Our results point out that both SLN and GHLN must be included in the sampling of surveillance programs. The detection of MTC in different body locations highlights the risk of excretion by different routes and the potential role of this species in the maintenance of this disease.