

Tuberculosis in Wild Boar, Epidemiology and Control Perspectives.

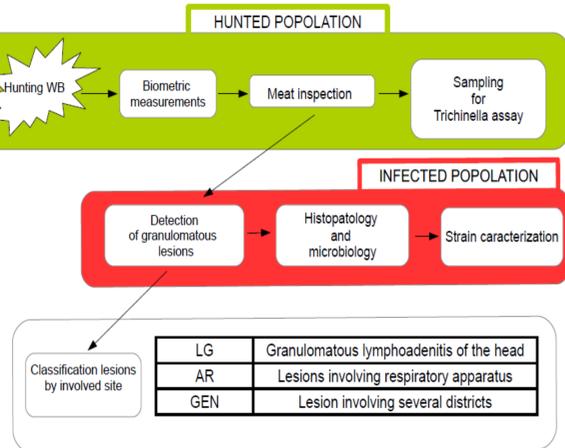
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INTRODUCTION

In Marche Region (it) Bovine Tuberculosis (BT) has been documented since 2002 in the San Vicino Appennine district (1450 km²; 1480 m asl) where a single genotype (Sb0120; Vntr 33533) is co-circulating both in cattle and Wild Boar (WB) with an increasing incidence in the last years, apparently unrelated to the number of hunted WB.

From the hunting season 2002-03 to the season 2017-18, no.112 WB were found positive for *M.bovis* isolated from specific lesions.



MATERIALS AND METHODS

Lymph nodes, lung and other organs with granulomas, have been found by Officials Veterinary during Meat Inspection on WB's carcasses (this activity is mandatory in the Region since 1999), and sent to the laboratory to confirm the suspected diagnosis of BT.

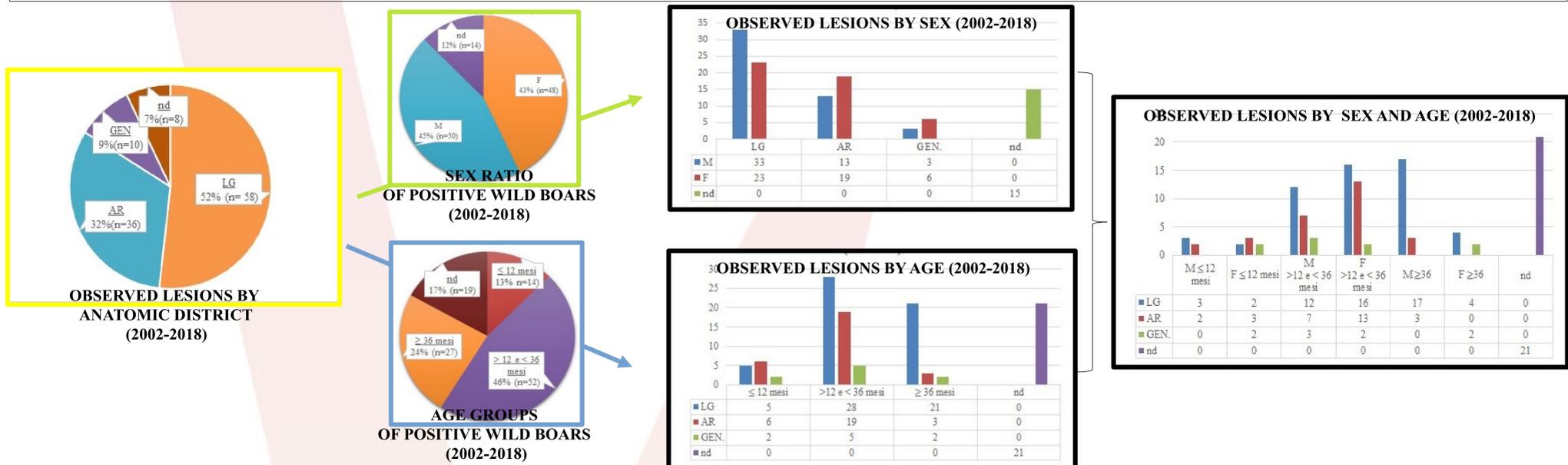
In each WB, diaphragm is sampled for trichinella assay and, in case of lesions, sampling is extended to the istopathology and bacteriology tests and biomolecular characterization of isolated strain. Each WB has identified by a tag and age sex and hunt district are recorded by a trained hunter and reported to the epidemiology unit of IZSUM.

In the present work we reported the site of the detected lesions by apparatus, in relationship with sex and age of the diseases animals:

RESULTS

On the basis of the classification (n=112), lymph nodes of the head is the main involved site (52%; n=58 cases), followed by lesions involving bronchial lymph nodes and lung (32%; n=36). In few cases (9% n=10 cases) we found generalized lesions involving several districts (in 7%, n=8 cases, data are missing).

The respiratory BT in WB is more represented in the central classes of age (>12 <36 months) than in more aged group (36 months or above) and detected more in female than in males; in those lasts the lesions are more localized in the lymph nodes of the head (retro pharyngeal and sub mandibular lymph nodes). Generalized lesions were found in every class of age (but we don't have WBs lower than one years of age)



DISCUSSION and CONCLUSIONS

In our experience, the first route of entry for Micobacteria in WB is represented by retromandibular and retropharyngeal lymph nodes. This district is the most involved, followed by the respiratory tract which is more represented in female and in the middle class of age (>12, <36 months). Such localization could be influenced by gregarious behaviour of females. Into the matriarcal group BT is shared by infected and healthy individuals where infection is transmitted through different routes as the alimentary (e.g. breastfeeding, rooting, necrophagy) and the respiratory route. The head lymph adenitis is most represented within the upper class of animals (>36 months) suggesting a scarce surviving of subjects hit by respiratory tuberculosis.

By a preliminary analysis of BT in WB we found an interesting distribution's pattern of lesions for age, sex and localization. This data could be represent a base for the disease control in the field. In fact, non selective collective hunt strategy can increase dispersion of infection, whilst a selective culling must take in account in respect of the main eco-pathological indexes and behaviour of the species. Control of BT in WB could be carried out within the matriarcal groups where probably micobacteria is shared within susceptible younger animals. This strategy could be integrated to the BT Control Plan for a domestic and wildlife integrated surveillance.

Bibliography is available to the authors