Risiken erkennen – Gesundheit schützen

Occurrence of pathogenic mycobacteria in fattening pigs

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Mycobacteria are widely prevalent in the environment. They occur in all animal species as well as in soil, hay dust and have also been found in wood shavings and saw dust. Mycobacteria are true survivors. They can survive in soil for up to 9 years.

In addition to apathogenic types, i.e. unharmful to human and animal health, there are also types of mycobacteria that can cause disease in humans and animals. These zoonotic agents are roughly subdivided into “tuberculous” and “nontuberculous” mycobacteria. The first include the closely related pathogens of the *Mycobacterium tuberculosis* complex, which cause common tuberculosis. Nontuberculous mycobacterial infections (mycobacteriosis) are caused by pathogens of the *Mycobacterium avium-intracellulare* complex (MAIC).

Both pathogenic species can also infect pigs. Available statistics show that the number of infections are low (0.15 to 0.5% of slaughtered animals have potentially pathogenic mycobacteria). According to currently available findings it appears highly improbable that humans are infected with tuberculous mycobacteria through foodstuffs produced from pork. In addition, there are no known cases in which the transmission of mycobacterioses, which can be caused by the nontuberculous mycobacteria of the *Mycobacterium avium-intracellulare* complex, occurred through foodstuffs. However, a final assessment of this risk is not possible at present as the total data available on infections of slaughter pigs with these pathogens are insufficient.

Nonetheless, it is imperative that slaughter pigs are tested for infections with pathogenic mycobacteria. The Federal Institute for Risk Assessment (BfR) deems it unnecessary to perform an incision of the submaxillary lymph nodes (*Lnn. mandibulares*) under certain conditions, e.g. if the animals are raised in integrated production systems (controlled housing conditions largely isolated from environmental influences and the entry of microorganisms from the surrounding area) and if serological testing methods are applied within production. The Institute is of the opinion that data on the occurrence of mycobacterioses in slaughter pigs and animal holdings should be collected comprehensively. This should include the housing system. Only a broad data basis that includes information on the situation of mycobacterioses in humans and the potential transmission of the pathogen through the consumption of pork containing mycobacteria can facilitate a final assessment on the food safety risk.

The full version of this BfR Opinion is available in German on http://www.bfr.bund.de/cm/208/vorkommen_von_pathogenen_mykobakterien_bei_mastschweinen.pdf