Review

Trueperella pyogenes infections in swine: clinical course and pathology

Ł.S. Jarosz, Z. Grądzki, M. Kalinowski

Department of Epizootiology and Clinic for Infectious Diseases, Faculty of Veterinary Medicine, University of Life Sciences in Lublin, Głęboka 30, 20-612 Lublin, Poland

Abstract

Trueperella pyogenes is an opportunistic pathogen causing purulent infections in pigs and other animal species. T. pyogenes infections in pigs are local and/or generalized depending on the immune status of the animals, their individual susceptibility and environmental factors. The occurrence of these infections on pig farms causes substantial economic losses in breeding and rearing. In sows from the breeding herd, the disease leads to infertility, embryonic death, abortion, and disorders of the menstrual cycle and lactation. Mastitis is the major cause of losses in piglets. Disorders of the musculoskeletal system, including inflammatory polyarthritis, fractures and degenerative joint disease results in the culling of animals with high breeding value. In other technological groups, multi-organ inflammations and movement disorders dominate, leading to a reduction of the slaughter value and elimination of pigs from breeding. Understanding of the clinical and pathological aspects of T. pyogenes infections in pigs will enable the development of effective methods of combating this disease on pig farms.

Key words: Trueperella pyogenes, swine, clinical course, pathology

Trueperella pyogenes infections – predisposing and risk factors

Trueperella pyogenes is a ubiquitous opportunistic pathogen causing purulent infections in various species of domestic, wild and exotic animals as well as birds (Brinton et al. 1993, Billington et al. 2002, Lenzen et al. 2006, Hassan et al. 2009, Lin et al. 2010, Hijazin et al. 2011b, Al-Tarazi et al. 2012, Rzewuska et al. 2012). This microorganism is part of the commensal flora of the mucous membrane of the respiratory and urogenital tracts, and thus the cause of the infection, the clinical course of the disease and the risk of its occurrence in animals are often difficult to estimate. T. pyogenes infections in pigs have recently become a growing clinical and epidemiological problem, particularly evident on medium and large scale farms.

Pyogenic infections in swine are also important from the point of view of the economics of pig production. The most common consequence of the occurrence of these infections in farming is the culling of animals, as a result of the development of a generalized purulent process and in connection with reproductive disorders, leading to a reduction in reproductive rates, and thus a decline in profitability (Bradley 2002, Ertas et al. 2005, Silva et al. 2008).

The factors that lie at the root of the growing...