BOVINE BESNOITIOSIS - AN EMERGING PARASITIC DISEASE OF CATTLE


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Bovine besnoitiosis is a protozoal disease of cattle which results in severe skin disease in heavily infected animals. The disease is caused by the cyst-forming coccidian parasite Besnoitia besnoiti. It has a significant economic impact on affected herds due to adverse effects on male fertility, reduction of slaughter weight, rejection of hide for leather production, and a case mortality rate of up to 10%.

The complete life cycle of B. besnoiti remains to be elucidated. Cattle are intermediate hosts while the definitive host is still unknown. Mechanical transmission by biting flies, such as tabanids, and by medical devices is possible and a direct animal-to-animal transmission seems to be likely. Once the infection is introduced into a herd, it can spread fast so that a large proportion of the herd may seroconvert within two or three years. Infection may remain clinically inapparent in the majority of animals. Usually not more than 30% of infected cattle show mild to severe signs of disease, though asymptomatic cattle may serve as a source of infection for naïve animals. To date no effective treatment is known and vaccines are currently not available outside Israel.

Bovine besnoitiosis has been present in the south of France since the late 19th century and was first reported from Portugal in 1915. Between the 1940s and 1980s it was also detected in various countries in Africa and Asia. Since 2001, several serious outbreaks have been reported from France, Spain and Portugal and first herd cases of the disease were discovered in Germany and Italy in 2008 and 2009, respectively. Due to these epidemiological developments bovine besnoitiosis was recently classified by the European Food Safety Authority as an emerging disease in Europe.

In this presentation we will review the current epidemiological situation in Europe, give details about the course of disease and diagnostic measures and report putative risk factors for cattle to become infected with B. besnoiti.