



2012-12-30-198 CGN minireviews on mycobacteria: (09) The Iceland, 80 years ago
To: (04) Food-borne, water-borne and air-borne diseases; (05) Zoonoses, general; (08) Mycobacterial diseases; (22) Veterinary administration; (27) Scientific information

CGN minireviews on mycobacteria as a public health risk

A new series, aimed at stimulating discussion on published literature dealing with the threat to public health posed by mycobacteria. Although some information of global significance has been known for decades, the risk posed by mycobacteria remains underestimated.

Prepared by the [Reference Laboratory for Paratuberculosis and Avian Tuberculosis](#) of the World Organization for Animal Health (OIE) and [Biomedical Technology, Epidemiology and Food Safety Global Network](#) operating in the Veterinary Research Institute, Brno, Czech Republic

We believe in the [One Health Initiative](#)

(09) The Iceland, 80 years ago (Pedley et al. 2004, Hruska and Pavlik 2009)

Prior to 1930 MAP infection and animal paratuberculosis in Iceland were virtually unknown. Then in 1933, twenty Karakul sheep were imported from Germany and, after quarantine, were distributed to 14 farms (Fridriksdottir et al. 2000). Although apparently healthy, some of the Karakul sheep were subclinically infected with MAP. They transmitted MAP to the Icelandic sheep population though they never developed disease themselves. By 1938 clinical paratuberculosis appeared in Icelandic sheep on five of the original farms. By about 1945, clinical paratuberculosis was in the cattle on the same farms, although infection in the cattle was difficult to diagnose as the organisms would not grow in culture; a characteristic of sheep MAP strains. The organism from these cattle was later confirmed as the sheep strain of MAP by IS1311 restriction endonuclease analysis (Whittington et al. 2001). Slowly the infection spread so that by the late 1950s the disease was epidemic with about 30% of sheep farms affected and huge annual losses. The mean incidence of Crohn's disease (number of cases/10⁵ per year) in the human population was 0.4 from 1950-59, 0.45 from 1960-69, 0.9 from 1970-79, 3.1 from 1980-89 and 5.6 from 1990-94 inclusive, the highest annual figure over this last five-year period being 8.2 in 1992. Young people were particularly affected (Bjornsson 1989, Bjornsson et al. 1998, Bjornsson and Johannsson 2000). Can anybody believe that links between MAP and Crohn's disease does not exist?

References

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A note by the CGNI Editor:

The convincing evidence of a link between paratuberculosis in sheep and cattle and Crohn's disease in an isolated territory. Compare with a global trade and mobility nowadays.



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