From the discovery of the Malta fever's agent to the discovery of a marine mammal reservoir, brucellosis has continuously been a re-emerging zoonosis

Jacques Godfroid, Axel Cloeckaert, Jean-Pierre Liautard, Stephan Kohler, David Fretin, Karl Walravens, Bruno Garin-Bastuji, and Jean-Jacques Letesson

Département de Bactériologie et d'Immunologie, Centre d'Étude et de Recherches Vétérinaires et Agrochimiques, 99 Groeselenberg, 1180 Uccle,
Abstract - Brucellosis is not a sustainable disease in humans. The source of human infection always resides in domestic or wild animal reservoirs. The routes of infection are multiple: food-borne, occupational or recreational, linked to travel and even to bioterrorism. New Brucella strains or species may emerge and existing Brucella species adapt to changing social, cultural, travel and agricultural environment. Brucella melitensis is the most important zoonotic agent, followed by Brucella abortus and Brucella suis. This correlates with the fact that worldwide, the control of bovine brucellosis (due to B. abortus) has been achieved to a greater extent than the control of sheep and goat brucellosis (due to B. melitensis), these latter species being the most important domestic animals in many developing countries. The long duration and high cost of treatment of human brucellosis reduces the efficacy of the therapy. There is no human vaccine for brucellosis and the occurrence of brucellosis is directly linked to the status of animal brucellosis in a region. In this context, the World Health Organization has defined the development of a human vaccine, besides the implementation of control and eradication programs in animals, as a high priority. The pathogenicity for humans of B. suis biovars 1, 3 and 4 is well established, whereas B. suis biovar 2 seems to be less pathogenic. Indeed, although hunters and pig farmers have repeatedly experienced infectious contact with B. suis biovar 2 (found in wild boar and outdoor-rearing pigs in Europe), isolation of B. suis biovar 2 from human samples have only been seldom reported. Marine mammal brucellosis, due to two new proposed Brucella species i.e. B. cetaceae and B. pinnipediae, represents a new zoonotic threat but the pathogenicity for humans of the different Brucella species found in cetaceans and pinnipeds still has to be clearly established.

Key words: Brucella / animal and human brucellosis / zoonoses / domestic and wildlife reservoir

Corresponding author: Jacques Godfroid jacques.godfroid@up.ac.za

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