

ORAL PRESENTATION

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Are *Babesia* a risk factor for blood products in an alpine area?

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After malaria, babesiosis is the second most common transfusion-transmitted vector-borne disease. This study investigates seroprevalence rates to *Babesia divergens* and *B. microti* in the Tyrol and assesses the risk of blood products being contaminated by either agent.

The area of investigation comprises the Austrian part of Tyrol. A number of 988 sera were tested for IgG antibodies against *B. divergens* and *B. microti* by in-house immunofluorescence assays (IFA). IFA-slides were tested by using commercially available hyperimmunesera.

Collection of questing ticks was performed in summer 2009 by about 120 volunteers among hunters at 25 sampling sites over a period of three months by flagging.

Of 988 sera, 21 (2.1%) were positive in IFA against the *B. divergens*-complex at titres of 1:128 or higher and 5 (0.5%) were positive in IFA against *B. microti*.

Under the presumption of a long-lasting immune response we can expect 0.5 (± 0.2 , 95%) seroconversions against *B. divergens* per 10.000 persons per year. For *B. microti* the same calculation results in 0.1 (± 0.08 , 95%) seroconversions per 10.000 persons per year. *B. divergens* The risk of a blood donation being contaminated by *B. divergens* or *B. microti* is estimated to be 24.2 and 5.8 per 100,000 blood donations.

The present study shows that the local population comes into seroreactive contact with at least one member of the *B. divergens*-complex and - to a lesser extent - *B. microti*. To our knowledge, it is the first demonstration of *B. venatorum* in the Tyrols. Thus, and as vector-borne diseases are subjected to dynamic changes, we recommend re-assessment of the risk of transfusion-mediated infections on a regular basis and to introduce PRT for blood components like platelets.

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