Summary

The objective of the presented thesis was to evaluate epidemiological and clinical characteristics of the most significant tropical febrile infections imported to the Czech Republic, which include dengue and chikungunya fever, malaria and enteric fever.

This retrospective-prospective study included a total of 292 patients with fever after a stay in the tropics who were treated at the Department of Infectious, Parasitic and Tropical Diseases of Hospital Na Bulovce in the years 2006-2014.

The most common illnesses were dengue fever (52.1%), followed by malaria (37.3%), enteric fever (6.2%) and chikungunya fever (4.4%). Dengue fever was imported in 88.2% cases from Southeast or South Asia and malaria in 63.3% from Sub-Saharan Africa.

Typical clinical and laboratory findings in dengue fever included headache (72.4%), rash (71.7%), muscle (67.6%) and joint pain (62.1%), leukocytopenia (26.5%), thrombocytopenia (22.4%), and low CRP (57.1%). Presented study confirmed that laboratory parameters differ in the acute and early convalescent phase of dengue fever. A total of 62.7% patients with malaria reported hedache and other frequent symptoms were dyspepsia (45.1%), dehydration (30.4%) and tachycardia (28.4%). Laboratory findings included high CRP (71.4%), decreased platelet count (52.4%) and hyperbilirubinemia (12.4%). This study identified independent predictors of severe clinical course in patients with dengue fever and malaria. Dominant symptoms in patients infected with chikungunya virus were intensive migratory polyarticular joint pain and dyspeptic problems in case of enteric fever (88.9%).

Methods of direct detection should be preferred in the diagnostics of dengue fever and the detection of NS1 antigen (89.0%) proved to be superior to RT-PCR (72.5%) in terms of sensitivity. On the contrary, Widal reaction is unreliable in the diagnostics of enteric fever due to its low sensitivity in the acute phase.

Only 5.8% patients with tropical malaria used antimalarial chemoprophylaxis properly. Low adherence to antimalarial chemoprophylaxis in business travellers represents a significant issue. The benefit of vaccination against enteric fever is limited due to its suboptimal effectiveness. In addition Vi vaccine does not confer protection against paratyphoid fever.

Submitted thesis analyzed the most comprehensive group of patients with tropical febrile infections imported to the Czech Republic. The study contributes to the improvement of differential diagnostics in patients with fever after stay in the tropics, stratification of clinical course in patients with severe tropical infections and evaluates available diagnostic methods, treatment and preventive measures.