

ABSTRACT

MenB vaccine uptake and number of reported cases with MenB infection

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Introduction and aims: Meningococcal disease caused by *Neisseria meningitidis* is global issue and it's known for its epidemical potential. In Europe, this disease is most often caused by B and C serotype. Main aim was to track occurrence and other epidemiologic aspects related to invasive meningococcal disease (IMD) in the Czech Republic from 2007 to 2016, focusing on serotype B and summarize available vaccinations which are used to fight disease mentioned above. Another was to analyse usage of Bexsero vaccination in the Czech Republic, hand in hand with number of spontaneous reports of adverse events after vaccination.

Methodology: To assess epidemiologic aspects related to IMD data from the Centre of epidemiology and microbiology were used (years 2007 – 2016). Vaccination utilization was analysed based on data from the State Institute of Drug Control and expressed as number of packages. Central database of spontaneous adverse events reports was used to determine number and character of reports.

Results: In period 2007-2016 there was a decrease in meningococcal disease occurrence caused by serotype B. This serotype was the most common in the Czech Republic and the most threatened group were children of age 0-4 years and 15-19 years. Death is also most often caused by serotype B, especially in age group 0-11 months. Vaccin Bexsero has been available on the Czech market since 2014 and its usage had increasing tendency. In 2017 the vaccine utilization decreased by 16,2 % compare to 2016. Central database of spontaneous adverse events has received 61 reports and 53 cases suspicion of an adverse effects (AEs). Erythema and pain in inject spot were most frequently reported local AEs. Fever and vomiting were most frequently reported system reactions. Twenty-four reported suspected AEs were unexpected.

Conclusion: Decreasing trend in meningococcal disease in the Czech Republic caused by serotype B has been shown. Vaccine Bexsero has proved to be a profitable choice in the fight against this disease, but it is still important to continue monitoring its adverse effects.