

## **ABSTRACT**

### **Trends in incidence of tuberculosis and non-tuberculous mycobacteriosis in children and adolescents in Czech republic in years 2001-2020**

BCG vaccination programs were introduced into Czechoslovakia more than 60 years ago under an entirely different epidemiological situation than that of today. Compulsory mass BCG vaccination was abolished in November 2010 and changed to a selective vaccination program for infants at high risk of contracting tuberculosis. This work wants to ascertain the risk of tuberculosis and non-tuberculous mycobacterial infection in 10 years following the change of the vaccination program and a comparison with the same period of mass BCG vaccination. The design of this work is a descriptive study, comparison, and statistical analysis of data for the period 2001–2020 about cases of tuberculosis and mycobacteriosis as reported in the Tuberculosis Register. The conclusions are that the trend of TB incidence in children in both compared periods is identical and statistically significantly decreasing ( $p < 0,001$ ). The trend of incidence of NTM cervical lymphadenitis in children is in the first period degressive and non-significant ( $p = 0,561$ ). However, in the second period, the trend is significantly increasing ( $p < 0,001$ ), in every, compared two subsequent years is an increase of 8 %. These findings indicate that the change from mass BCG vaccination to selective vaccination of high-risk newborns and the abolishment of BCG revaccination is a promising vaccination strategy with careful watchfulness for NTM caused lymphadenitis.

*Keywords: BCG vaccination, incidence, lymphadenitis, Mycobacterium tuberculosis, Mycobacterium avium complex, mycobacteriosis, tuberculosis*

