Nontuberculous mycobacteria in immigrants in Denmark through 31 years

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Background

Evidence about nontuberculous mycobacterial (NTM) infection and disease in the immigrant population is sparse. Consequently, we aimed to investigate NTM epidemiology among immigrants in Denmark.

Methods

Nationwide cohort study of all positive NTM cultures from immigrants in Denmark from 1991 through 2021, stratified by patient demographics, country of origin, and clinical significance.

Results

1126 positive NTM cultures from 707 immigrants were identified. The overall incidence rate (IR) of positive NTM cultures among immigrants was 6.0/100,000 (95%CI 5.6-6.4). Although the number of immigrants more than tripled in Denmark during the study period, there was no trend in the IR of positive NTM cultures (Quasi-Poisson regression, p=0.259). When stratified according to disease categories, the IR of definite NTM disease was 1.0/100,000 (95%CI 0.8-1.2), possible NTM disease 1.1/100,000 (95%CI 0.9-1.3) and NTM colonization 4.0/100,000 (95%CI 3.6-4.3). Immigrants had higher IRs of possible NTM disease (incidence rate ratio (IRR)=1.7, 95%CI 1.4-2.1, p<0.000) and NTM colonization (IRR=4.7, 95CI 4.2-5.2, p<0.000) compared to Danish-born. For definite NTM disease, IRs were lower for immigrants compared to Danish-born (IRR=0.8, 95%CI 0.6-0.9, p=0.007).

Conclusion

We found a higher incidence of NTM among immigrants compared to Danish-born but a slightly lower incidence of definite NTM disease. Whether these findings reflect differences in true disease or in diagnostic sampling remains unknown.