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Epidemiology and clinical findings of influenza in international travellers

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Background:

Few risk factors for infection with seasonal influenza virus among international travellers are known and research on epidemiology is scarce.

Methods:

In this retrospective study we assessed pre-travel baseline condition, travel data and post-travel clinical findings of influenza-positive travellers diagnosed by RT-PCR of nasopharyngeal swab. Comparison with influenza-negative travellers with similar symptoms is ongoing. Data was gathered from the Travel Clinic of the University Medical Center Hamburg-Eppendorf at the Bernhard-Nocht-Institute in Hamburg, Germany and ranges from 2015 to March 2020.

Results:

Twenty-five travellers(18,3%) did not meet the inclusion criteria of a complete data set and symptom onset under 6 days after travel return. Of the 57 remaining individuals 34(59.6%) were male, 23(40.4%) were female. Age range was between 2 and 78 years. Median age was 33 years. Main symptoms were fever and cough/sore throat/rhinorrhea(n=52; 91,2%), followed by myalgia (n=36; 63,2%). 13 travellers(22,8%) had influenza infection outside the German influenza season ranging from October to mid-May. Influenza A(n=45; 78,9%), B(n=11; 19,3%), both A and B(n=1; 1,8%) were detected. Most infections were acquired in the World Health Organization (WHO) South-East Asia Region(n=19; 33,3%), followed by the African Region and Region of the Americas(n=13; 22,8%). Main travel reasons were tourism(n=42; 73,7%) and work(n=9; 15,8%). Two travellers(3,5%) were hospitalized, 14(24,6%) had a previous illness, six(10,5%) received antibiotic treatment, one(1,8%) had pre-travel influenza vaccination.

Conclusion:

The infection period extends throughout the year. Symptoms are non-specific and similar to those of an autochthonous infection. The vaccination rate is extremely low and therefore holds great prevention potential.