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## Lung alert

### Human metapneumovirus: a new threat?

Human metapneumovirus (HMPV) causes illness in both children and adults. Like other viruses, infection produces incomplete immunity and re-infection can occur at all ages. The aim of this research was to identify the incidence and clinical impact of HMPV infection over four consecutive winters in adults in both an inpatient and outpatient setting.

The authors used serum and respiratory secretions over a period of four winters from four prospective cohorts. Nasopharyngeal swab specimens were analysed for HMPV RNA by RT-PCR and serum was serology tested. A symptomatic infection was characterised by upper respiratory tract symptoms with positive RT-PCR or a fourfold increase in IgG titre. An asymptomatic infection only had the increase in serology titre. 1439 patients were enrolled; 611 healthy elderly persons, 537 high-risk individuals (ie, underlying chronic obstructive pulmonary disease or cardiac problems), 291 aged 19–40 years and 1386 hospitalised. Combined yearly infection rates varied from 5.9% in the healthy elderly population to 13.1% in the young. Rates varied not only between study groups, but from year to year. A large proportion of infection was asymptomatic (highest in the young group), and co-infection with other viruses was seen in healthy elderly persons, high-risk elderly persons and the hospitalised groups. Of the hospitalised patients, 8.5% were identified with HMPV, with the infection rate varying from 4.4% to 13.2%. Wheeze was the commonest symptom associated with infection.

Although HMPV is more common in younger individuals, it is more likely to be symptomatic in those who are older and have underlying co-morbidities. The authors admit determining causality with an acute illness solely on the basis of antibody response may be difficult. They also believe that HMPV infection may be the cause for more hospitalisation for acute respiratory symptoms in elderly patients with respect to other more well-known viruses. Nasopharyngeal swabs can be limiting in terms of their detection, and perhaps rates would have been higher in induced sputum or nasal wash. More research is required to assess the role of HMPV, particularly in patients with respiratory disease, and to determine whether the development of a vaccine would be of clinical benefit to patients.

- ▶ Walsh EE, Peterson DR, Falsey AR. Human metapneumovirus infections in adults. *Arch Intern Med* 2008;**168**:2489–96.

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