

## Colonisation of Legionella Species in Hotel Water Systems in Turkey 2005

### Abstract

#### **Background.**

The goal of this study was to evaluate the prevalence of Legionella species in hotel water distribution systems in Alanya, Turkey, which is an important tourism center.

#### **Methods.**

Water and swab samples were obtained from 52 Turkish hotels from August 2003 to September 2005. Water samples were collected in 100 mL sterile containers and were concentrated by membrane filters with a pore size of 0.45  $\mu$ m. Heat treatment was used to eliminate other microorganisms from the samples, which were then spread on buffered charcoal yeast extract ? agar plates and glycine, vancomycin, polymyxin, cycloheximide agar plates. Cysteine-dependent colonies were identified by latex agglutination.

#### **Results.**

In all, 491 water and swab samples were analyzed. The results of all samples were **negative** for Legionella in **16 (30.8%) hotels**. Legionella species (92.5% of which were Legionella pneumophila) were **detected in 93 (18.9%)** of the samples. The most frequently isolated species were Legionella pneumophila serogroups 6 (63.5%) and 1 (21.5%).

#### **Conclusions.**

Legionella pneumophila serogroup 6 was the most common isolate detected in Turkish hotel water systems in our study. The result of Legionella urinary antigen tests, which are the diagnostic tests most often used to identify legionnaires' disease, may be negative in people infected with L pneumophila serogroup 6. We suggest that clinicians should apply the whole spectrum of laboratory methods for the detection of legionnaires' disease in patients with pneumonia of unknown origin and history of travel to Alanya, Turkey.

Source

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Abstract

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