

## **Research Reports**

# **Collaborative research studies on Legionellosis in Barcelona**

The Clinical Epidemiology Unit of Barcelona is a member of the Study Group of Community Legionellosis in Catalonia. Other investigators involved are from the Departament de Sanitat i Seguretat Social Generalitat de Catalunya: Delegació Territorial de Barcelona, Girona, Lleida, Tarragona, and the Institut Municipal de Salut Pública, Ajuntament de Barcelona. Since its inception, the study group has completed two epidemiological studies on Legionnaires' disease.

The first study was a review of reported cases from 1992 - 1999 from the epidemiological surveillance system in the province of Barcelona. This study demonstrated the rising incidence of Legionellosis from 0.3/100,000 in 1992 to 4.75 cases/100,000 in 1999. Majority of the cases were community-acquired (67.5%), emphasizing the significance of community cases. The reported increase in incidence could be partly attributed to the introduction of a new diagnostic technique, the urine antigen detection test for Legionella. Since its introduction in 1996, it has been the most frequently used diagnostic test. These results have recently been published in the journal *Medical Clinics of Barcelona* 2001.

The second study was a matched case-control study that aimed to determine the factors associated with the occurrence of Legionnaires' disease in the community. This was a two-year study conducted from 1998 -2000 with funding from the Ministerio de Sanidad of Spain. Preliminary analysis of 124 cases and 451 controls showed that Legionnaires' disease was associated with an immunodeficient state, walking near ground movements, and possibly to proximity to cooling towers, faucet filters and shower protection. Environmental samples were also obtained, of which 17 out of 210 were positive for Legionella. No differences, however, were observed between cases and controls. Although the presence of hot water tanks and deposits was not a risk factor for acquisition of Legionella, they were promoting factors for colonization of domestic drinking water systems with legionellaceae. No association was found with water supply problems. In addition, 34 clusters of Legionnaires disease were detected, and possible association with temperature and atmospheric pressure was found. The study concluded that there is a possible association of community-acquired Legionellosis with some aspects of water systems in the household. Clustering of Legionnaires' disease was frequent; and this could be related to meteorological factors. These preliminary results were published in the journal *Enfermedades Emergentes* (2000).

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