Prospective epidemiologic survey of patients with community-acquired pneumonia requiring hospitalization in Switzerland

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BACKGROUND: Community-acquired pneumonia (CAP) is a common problem and the principal infection requiring hospitalization, but its treatment is complicated by the difficulty in microbiological diagnosis and the increasing incidence of antibiotic resistance among respiratory pathogens. The purpose of this paper is to present the main epidemiologic features of patients with CAP requiring hospitalization in our country. METHODS: We enrolled three hundred and eighteen adult patients with CAP requiring hospitalization in seven large medical centers in Switzerland during two winter periods. The patients’ mean age was 70.4 years. This study describes the epidemiology of these patients. Clinical, radiologic and microbiological evaluations were performed at study entry during treatment, and at 4 weeks post-therapy. For microbiological diagnostic purposes, sputum culture, throat swab culture, PCR, blood cultures, Legionella urinary antigen and serologic evaluations were also performed. RESULTS: Despite the higher mean age, the overall mortality rate was 8%, lower than in other comparable studies. The most common underlying diseases present at study entry were cardiac failure (23%), chronic obstructive pulmonary disease (20%), renal failure (15%), and diabetes (12%); 40% of the patients were smokers. Although dyspnea, cough and positive pulmonary auscultation findings were present in about 90% of patients, fever >38 degrees C was present in only 64%. The most frequently isolated respiratory pathogens were Streptococcus pneumoniae (12.6%), Haemophilus influenzae (6%), Staphylococcus aureus (1.6%), and Moraxella catarrhalis (1.6%). Atypical pathogens were frequently found, with the following distribution: Mycoplasma pneumoniae, 7.5%; Chlamydia pneumoniae, 5.3%; and Legionella pneumophila, 4.4%. The mean duration between onset of symptoms and hospital admission was 4.8 days, and the mean treatment duration was 12.1 days. Two weeks after the start of therapy, although clinical symptoms were absent, radiologic infiltrates were still present in 24% of patients. CONCLUSIONS: The microbiological diagnosis in CAP can be established in only about 50% of cases with the combination of several diagnostic tools. Epidemiologic surveys of CAP should be performed on a regular basis, regionally, as a way to improve the management of these infections.
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