

Respiratory infections

0035

The hospitalization of patients with legionellosis in Poland in the years 2008-2015

Irena Kosinska¹, Aneta Nitsch-Osuch¹, Krzysztof Kanecki¹, Pawel Gorynski², Piotr Tyszko³

¹Medical University of Warsaw, Department of Social Medicine and Public Health, Warsaw, Poland

²National Institute of Public Health - National Institute of Hygiene, Warsaw, Poland

³Institute of Rural Health in Lublin, Lublin, Poland

Introduction. Legionella pneumophila, recognized as an emergency pathogen, is responsible for triggering legionellosis or Pontiac fever. A measure of the exposure to this type of bacteria is the reported incidence of infections in these strains and the associated hospitalization. Since 2005, about 6000 cases of legionellosis (LD) have been reported in the EU / EEA countries. Deaths range from about 8 to 10% and the average incidence in Europe is over 1 / 100th, but in Poland over 0.05/100th. Among the most pathogenic strains L. pneumophila are the Philadelphia and Benidorn strains, medium-pathogenic are OLDA and OLDA / Oxford, Camperdown has low pathogenic potential. In addition, the strain L.pneumophila sg1 OLDA ST1 has a gene encoding toxin RTX, which is found throughout the world and is considered to be a factor in human infections, including nosocomial infections.

Objective: The objective of this study was to analyze factors that may be related to the epidemiology of legionellosis among hospitalized patients in Poland in 2008-2015. **Patients and methods.** The authors conducted a retrospective, population-based study using hospital discharge records with a diagnosis of legionellosis. Epidemiology of this disease was estimated on the basis of data from a Polish hospital morbidity study carried out by the National Institute of Public Health. Data were collected in the years 2008-2015. The final group was comprised of 84 patients who were first-time hospitalized with the diagnosis of the legionellosis.

Results: The final study group comprised 46 (55%) male and 38 (45%) female patients with first-time hospitalizations for legionellosis, with the predominance of patients living in more urban (59) than rural areas (24), $P < 0.05$. The patients were hospitalized in 17 hospital departments, with the majority of them - 19 (22.62%) in the internal medicine ward, while only 16 (19.05%) were hospitalized in the pulmonology ward and 10 (11.91%) in the infectious diseases ward. The hospitalization time was on average 14.68 days, $SD \pm 10.8017856$, and the mean age of the patient was 45.06 years ($SD \pm 21.3278206$) and fluctuated in the range from 2 to 84 years. Only 30.95% of the patients had only legionellosis. Other patients reported from one to seven accompanying illnesses. During the study period, 4 deaths were recorded, which constituted 4.76% hospitalized.

Conclusions. In the group of hospitalized patients with legionellosis we observed the predominance of patients living in more urban (59) than rural areas. Fluctuations in the number of patients with hospitalized with legionellosis may suggest the existence of others factors that may be related to the incidence of legionellosis in Poland. The assessment of current incidence of legionellosis in Poland due to exposure to *L.pneumophila* requires further research. Hospital discharge records may be as important elements for epidemiological studies on legionellosis.