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# PERTUSSIS AS A CURRENT EPIDEMIOLOGICAL AND CLINICAL PROBLEM - ANALYSIS OF CASES IN MAZOVIAN REGION (POLAND)

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**Introduction.** Pertussis is an important cause of death in infants worldwide, and continues to be a public-health concern even in developed countries. Before vaccines against pertussis became widely available, pertussis was one of the most common childhood diseases, but following large-scale vaccination, a dramatic reduction (>90%) in incidence and mortality was observed in industrialized world. In the last decades, an increase of reported incidence of pertussis has been observed in many countries, despite a high vaccination coverage among infants and children. Various explanations have been given to explain the pertussis re-emergence: increased awareness, improved diagnosis, adaptation of causative agent and waning of vaccine - the induced by vaccination immunity lasts 4-14 years .The objective of our study was to present the epidemiology of pertussis in Mazovian region (Poland) in years 2005-2009.**Material and methods** . The restrospective analysis of epidemiological data collected by Sanitary Station in Warsaw was conducted. The incidence rates were calculated using official data form Central Statistical Office. We analyzed age of patients, the course of the disease (including hospitazations due to pertussis), and the previous history of vaccinations against pertussis.**Results**. 1455 cases of perstussis were reported in the analyzed period. The incidence rate of pertussis ranged from 2,4/100.000 in 2006 to 7,91/100.000 in 2008. Every year the incidence rates were higher for females than males (from 3,04/100.000 in 2006 to 9,21/100.000 in 2005). The incidence rates were highest at two groups : patients younger than 1 year (from 13,27/100.00 in 2005 to 32,68/100.000 in 2007) and at the age 10-14 years (from 68,49/100.000 in 2008 to 11,78/100.000 in 2006). The highest proportion of cases was also ate the age group 10-14 years (from 26,37% in 2009 to 45,98% in 2008). Number of hospitalizations due to pertussis varied from 46 (2006) to 137, while the proportion of cases required hospitalization ranged from 25% (2008) to 37%. 392 (27%) cases of pertussis were reported among patients with negative or not confirmed history of pertussis vaccination. Vaccinations against pertussis were not conducted because of: a) medical contraindications (41 patients), b) too young age for vaccination (18 patients), c) not completed schedule of vaccination (46 patients), d) persons were born before 1960 (161 patients), f) lack of written documentation of vaccination (126 patients). The most common reason of lack of pertussis vaccination, found in 41% cases was being born before introduction the universal and mandatory vaccination in 1960. Among 60 children younger than 1 year who developed symptoms of pertussis, 50 (83%) did not completed the full

scheme of three-dose of vaccination against pertussis. Most of them (73%) received no or one doses of vaccine. The age of a patient in this group ranged from 5 days to 11,5 months**.Conclusions**. There is a need to recommend and conduct booster vaccination against pertussis in adolescents and adults in order to limit spreading the disease in these age groups and also to protect unvaccinated newborns and infants for whom older persons may be a source of the disease.