



Prevalence of risk factors for Drug-Resistant *Streptococcus pneumoniae* in patient who use Levofloxacin for Community-acquired pneumonia at a hospital in Southern Thailand.

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Abstract

Levofloxacin is a fluoroquinolone antibiotic that appeared on the National List of Essential Medicines 2016. Levofloxacin can be used for moderate to severe community-acquired pneumonia (CAP) and other lower respiratory tract infections that suspect drug-resistant *Streptococcus Pneumoniae* (DRSP). However, the improvement of the prescription of levofloxacin is needed to preserve this medication. A risk factor of Drug-Resistant *Streptococcus Pneumoniae* (DRSP) needs to clarify for making the decision. However, there are limited data about risk factors to DRSP. Should adequate information is present, the decision to prescribe levofloxacin will be more rational and accurate. To investigate the prevalence of risk factors of DRSP in the patients who use levofloxacin for community-acquired pneumonia (CAP), the authors conducted a descriptive retrospective study by collecting hospitalized patient data from the HOSxP database. The data were also collected from outpatient and inpatient medical records that use levofloxacin as empirical therapy for CAP. The authors then analyzed the data using Microsoft Excel. During October 2013 - September 2016, a total of 245 patients were recruited for this analysis. However, only 73 patients have fully met the inclusion criteria. All included patients had used levofloxacin as empirical therapy for CAP. The prevalence of the patients who have risk factors of DRSP is 0.77. The authors found the risk factors of DRSP in 56 patients who have more than one risk factor. For example, 31 patients (42.46%) had older age (>65 years), 19 patients (26.02%) had Chronic Obstructive Pulmonary Disease (COPD), 17 patients (23.28%) had previous antibiotic usages within 3 months, 14 patients (19.17%) had Renal Disease, 11 patients (15.06%) had Coronary Artery Disease, and 6 patients (8.21%) had Diabetes Mellitus. The risk factors particularly elderly people (age >65 years) and COPD are the most prevalent risk group. These kinds of factors must be considered before prescribing Levofloxacin.

Keywords: risk factors, levofloxacin, drug-resistant *Streptococcus pneumoniae*, community-acquired pneumonia