Potential overuse and medical costs of proton pump inhibitors in Switzerland: A claims data based observational study

Introduction: Proton pump inhibitors (PPIs) are among the most frequently prescribed drugs. In Switzerland, total costs for pantoprazole are ranked 5th of all drugs, amounting to roughly 98 million Swiss francs annually. However, it has been assumed that PPIs are often used inappropriately. Little is known about absolute PPI dosages prescribed over an extended period of time and the proportion of potentially inappropriate PPIs (PI-PPI). We will describe the use of PPI and PI-PPI in Switzerland from an epidemiologic perspective, reporting on trends of the most recent years.

Methods: Using health insurance claims data of a major health insurance company, we measure the proportion of patients using a PPI during the years 2012-2016. Derived from the concept of defined daily doses (DDD), we calculate the total amount of pantoprazole-equivalents dispensed per patient and corresponding direct (3rd party payer) medical costs. We assess the proportion of patients who received annual dosages exceeding maximum guideline recommendations (>11.5g/year; more than 8 weeks of 80 mg and 44 weeks of 20 mg per day).

Results: Out of 1.2 million insured people, there was a rising proportion of people being dispensed a PPI, using preliminary and uncontrolled data (17.7% in 2012, 18.9% in 2013, 19.5% in 2014, and 20.0% in 2015 and 2016). We will present standardized data describing the total amount of PPIs per patient and corresponding costs. Furthermore, we will delineate the proportion of patients fulfilling criteria for PI-PPI use and its relative change.

Discussion: Preliminary data show that one in five insured patients use PPIs at least once a year and this proportion seems to have risen over time. The ongoing analysis of our data will provide insights into the total amount of PPIs dispensed, costs and the extent of the potential overuse of these drugs.

Future investigations of this data will focus on health care determinants and aspects of variation of PPI use and potential overuse.

Keywords: proton pump inhibitors, PPI, inappropriate, overuse, low-value care