

Data-driven prescription patterns in patients under maintenance treatment for respiratory diseases from the Portuguese prescription database

Ana Sá-Sousa, Rita Amaral, Rute Almeida, Alberto Freitas, João A Fonseca
European Respiratory
Journal 2019 54: PA2502; DOI: 10.1183/13993003.congress-2019.PA2502

Abstract

We aimed to identify prescription patterns in respiratory patients using an unsupervised (data-driven) method, in a random sample of patients aged >14 years (n=8799), retrieved from the Portuguese Electronic Medical Prescription database. Respiratory patients were defined if >2 packs of maintenance treatment for respiratory diseases were prescribed in 2016. We analysed all the prescriptions (n=39810) for respiratory diseases and exacerbations by medication type. Two-step clustering was based on the presence of ICS, LABA, LTRA, LAMA, LABA, SABA, SAMA and on the speciality of prescribers.

Eleven prescriptions patterns were identified (Fig). The more prevalent patterns were C10, characterized by only antibiotics and antiH1, and C5/7 having predominantly ICS+LABA. Similar patterns were found between C10/11, and Classes 5 and 2, differing mainly on the speciality of the prescriber. The median(P25-P75) age ranged from 44(30-59) to 75(65-82) for C8/4, respectively. C1/9, prescribed mostly to male patients, median age of 74(64-82) and 72(63-80), respectively, suggest a COPD pattern. C6/8 containing ICS+LABA and LTRA are patterns suggestive of asthma.

This was the first analysis of prescription patterns of respiratory medication from the official Portuguese prescription database. The medication patterns found in this study were the expected in patients with asthma and/or COPD.

