One-year coverage by inhaled steroids in asthma: French claims data.

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INTRODUCTION

• Long-term adherence to inhaled corticosteroids (ICS) in persistent asthma remains partially explored at population level in France.
• More particularly, it is unclear whether asthma patients identified during an episode of regular ICS use remain properly treated over subsequent months, or whether a group of irregularly treated patients eventually appears.
• We have measured among asthma patients regularly treated by ICS at inclusion the proportion of days covered by ICS over the 12 subsequent months and we identified the characteristics of patients who were correctly covered by ICS during this period.

METHODS

Study design and data source:
A historical cohort was identified in a 1/97th random sample of the French national claims data.

Study population:
Patients aged 6-40 were identified during an ICS treatment episode (3 units of ICS of a same molecule, consecutively dispensed within 120 days) between 2007 and 2012 (Figure 1).

Exposure to ICS:
• Durations of drug coverage for each dispensed ICS canister were computed using specific prescribed daily doses from Electronic Medical Records (Cegedim).
• Patients’ coverage by ICS was studied over the 12-month study period following the third canister initially dispensed (Figure 1), using the Medication Possession Ratio (Figure 2).

Analyses:
• The distribution of individual MPRs over the 12-month study period was described by an histogram (Figure 3).
• Factors associated to an adequate drug coverage by ICS (MPR ≥80%) were identified (logistic regression).

RESULTS

1. Descriptive results:
• A total of 5,096 patients met inclusion criteria.
• The study population consisted of 42.1% of children/teenagers (<17 year-old), while 48.8% of patients were females.
• Mean MPR was of 54.4% (Q1-Q3: 31.0%-76.8%).
• Only 24% of the study population presented MPR ≤ 80% during the study period (Figure 3).

2. Factors associated to a correct coverage by ICS (MPR ≥ 80%)
• Children and teenagers presented higher MPR than adults.
• Conversely, women tended to have lower MPR values than men.
• Patients receiving higher dispensations levels of short-acting beta-agonists were more likely to be correctly covered by ICS therapy.
• So were more severe asthma patients, as identified by a long-term disease status and/or a past hospitalisation for asthma.
• In contrast, associated comorbidities, free-access-to-care status, dispensing level in systemic corticosteroids had a more limited impact on ICS drug coverage.

RESULTS (continued)

Significantly higher probabilities of achieving MPR ≥80% were also observed in case of:
• Prescribed canister with 200 unit doses at index date.
• ICS prescribed by a hospital physician at index date.
• Switch of ICS during the study period.
• At least 3 different prescribers of respiratory treatments during the study period.
• Frequent medical visits to general practitioners during the study period.

Conversely, no significant statistical association appeared with:
• The type of inhaler dispensed at index date.
• The presence of a specialist during the study period.
• The dispensation of a LABA/ICS fixed-dose combination at index date.

CONCLUSIONS

• The identification of asthma patients regularly treated by ICS during several months does not guarantee any long-term adherence to therapy.
• This suggests a fragmented use of ICS over time, with drug episodes possibly interrupted during asymptomatic periods (= no symptom, no asthma).
• Patients with a more severe or symptomatic asthma, more regularly supervised by GPs and those who had their ICS therapy adjusted during the study period tended to present a better drug coverage by ICS.

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