Background

Oral corticosteroids (OCS) are widely used as frontline treatment in a variety of chronic inflammatory diseases, including asthma. 1

Even at low doses, use of OCS is associated with risk of acute and chronic adverse events, and this risk increases with dose, duration, and/or frequency of use. 2,3

The comorbidities associated with both chronic and repeated short-term use of OCS increase patients’ clinical burden and overall healthcare expenditure. 4

Limited data are available characterizing the patterns of OCS use, including dose and duration, across healthcare providers (HCPs) treating asthma.

Objectives

To quantify and characterize patterns of OCS utilization among primary care physicians (PCPs), allergists, and pulmonologists

To examine differences in prescribed dose and duration of OCS treatment among HCPs

Methods

A retrospective analysis was conducted using asthma claims from Symphony Health for the period October 31, 2013 – October 31, 2018.

This retrospective cohort included adult patients (age ≥18 years) who had ≥2 claims indicating asthma on separate dates during a 24-month window and were receiving pharmacotherapy from an identifiable HCP (Figure 1)

OCS treatment patterns, including dose and duration of therapy, were assessed in the cohort by HCP type (PCPs, allergists, pulmonologists).

Patients were also segmented by HCP type according to the Global Initiative for Asthma treatment (GINA-2016)

Acute and chronic OCS treatment was defined as continuous use for <6 months and ≥6 months, respectively.

High-, medium-, and low-dose OCS was defined as >10 mg, 5-10 mg, and <5 mg daily dose respectively.

Results

1,449,657 patients (46% of the eligible cohort) received at least one prescription for OCS for the treatment of asthma

The proportion of patients prescribed acute and/or chronic OCS was higher among PCPs compared to allergists and pulmonologists (Figure 2)

PCPs accounted for 77% of all OCS use when specialty-specific utilization rates were weighted by total patients (Figure 3)

Among all HCPs, OCS doses >10 mg/day were most commonly prescribed and associated with a shorter duration of therapy (Figure 4-6)

An OCS prescription duration ≤30 days accounted for 80%, 88%, and 77% of acute, high-dose OCS prescriptions written by PCPs, allergists, and pulmonologists, respectively.

Relative to PCPs and allergists, pulmonologists more commonly prescribed low-, medium-, and high-dose OCS for durations >1 month (data not shown)

Figure 3. Weighted specialty-specific OCS utilization rates

Figure 4. Acute OCS treatment by dose and duration

Figure 5. Specialty-specific acute OCS utilization by dose group

Conclusions

Within this insured population of adult patients, the vast majority of asthma treatment was acute, for durations of less than one month

PCPs account for the majority of OCS use in asthma when compared to allergists and pulmonologists.

Pulmonologists were more likely to extend the duration of acute OCS relative to PCPs

A large proportion of patients receive daily doses of OCS >10 mg/day, increasing the potential risk of OCS-associated complications

Use of OCS remains widespread among patients with asthma, emphasizing the high level of uncontrolled asthma and the need for new therapies

References


Acknowledgements


Disclosures

Funding from GlaxoSmithKline and Hillrom to the authors

Funding from GlaxoSmithKline and Corrona to the authors of Consumer Biometrics, Inc., and related stock ownership in GlaxoSmithKline, Inc.

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