Utilization of an EMR Tool to Document Steroid Burden

Eleanor Feldman MD, Meredith Akerman MS, Sonam Sani MD, Irum Noor DO, Stephanie Mawhirt DO, Stacy Nassau MD, Erin Banta MD, Amanda Schneider MD, Luz Fonacier MD
NYU Winthrop Hospital, Mineola, NY

Introduction

In the United States, asthma is increasing in prevalence now affecting 25.7 million people. Patients with asthma are more likely to have comorbid atopic dermatitis and allergic rhinitis and may require multiple formulations of corticosteroids. It is imperative that prescribers be aware of a patient’s total steroid exposure (steroid burden) in order to monitor side effects and recommend or modify treatment.

Evidence-based methods to educate patients and to monitor steroid use/adverse effects are scarce in the literature.

Objective

We developed an electronic medical record (EMR) tool for patients treated with corticosteroids in order to:

- Monitor side effects
- Provide an intervention
- Educate patients
- Provide Documentation

Design & Methods

We conducted a quality improvement study on all patients with a diagnosis of asthma treated with inhaled corticosteroids.

Over an 8-month period, 75 patients with 101 patient encounters were analyzed.

Using our EMR tool during routine visits, data was collected on type of corticosteroid, dose and frequency of administration, side effects, interventions, patient counseling and satisfaction.

Total steroid burden was determined by a scoring system and assigned as low, medium and high dose.

Results

Demographics

- **Age** – average = 58.2 years
- **Female/Male** = 48 (64%)/27 (36%)

**Inhaled**

- **n = 47, 46.5%**

**Intranasal**

- **n = 32, 31.7%**

**Systemic**

- **n = 7, 6.9%**

- **n = 32, 31.7%**
- **n = 15, 14.9%**
- **n = 0, 0%**

- **Candidiasis**
- **Hoarseness**
- **Cough**
- **Nosebleed**
- **Throat Irritation**
- **Nasal Dryness**
- **Bone Mineral Change**
- **Weight Gain**
- **Moon Facies**
- **Sleep Disturbance**
- **Mood Change**
- **Cataracts**

**Side Effects & Number of Events**

<table>
<thead>
<tr>
<th>Intervention for Corticosteroid Burden</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease Dose</td>
<td>4.95%</td>
</tr>
<tr>
<td>Increase Dose</td>
<td>5.94%</td>
</tr>
<tr>
<td>Discontinue</td>
<td>0.99%</td>
</tr>
<tr>
<td>No Change/Monitor</td>
<td>86.10%</td>
</tr>
</tbody>
</table>

Conclusion

Our EMR tool is an efficient way to quantify steroid burden and identify adverse reactions from corticosteroid use.

Continued evaluation of this EMR tool could standardize a method for documenting steroid burden in asthma patients.

References

- Loftus PA, Wise SK. Epidemiology and economic burden of asthma. Int Forum Allergy Rhinol. 2015;Suppl 1:S7-10

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