High Procalcitonin Levels in Patients With Severe Drug Reactions

Although procalcitonin (PCT) serum level is still considered to be a highly specific and sensitive biologic marker of severe bacterial infections, it can be increased in noninfectious situations such as diffuse metastatic solid cancers, C-cell carcinoma of the thyroid gland, major trauma or surgery, or after cardiopulmonary bypass. Herein we show that PCT level increases in some patients with severe drug reactions. Clinicians should therefore not rely on PCT values to discriminate between infectious and immunoallergic eruptions in patients who present with fever and a rash.

Methods. We investigated 8 consecutive patients with a severe cutaneous drug eruption. Four patients had Stevens-Johnson syndrome (SJS); 2 had drug rash, eosinophilia, and systemic symptoms syndrome (DRESS); 1 had acute generalized exanathematosus pustulosis; and 1 had Lyell syndrome. The diagnosis of drug eruption was based on clinical, biologic, and histologic findings. In all cases, investigations including routine biology tests, blood cultures, urinary bacterial examination, pulmonary radiography, and serology failed to identify any bacterial or viral agent.

Results. Procalcitonin levels were significantly elevated in 2 patients, one with DRESS (3.96 µg/L) and the other with SJS (0.53 µg/L). All patients healed within a mean of 25 days (range, 15-45 days) without any antibiotic treatment.

Comment. Our findings suggest that in some patients with severe drug eruptions, PCT level can be elevated in the absence of bacterial infection. Thus, elevated PCT levels neither predict infection in patients with severe drug rashes nor allow discrimination between infectious and noninfectious eruptions.

Mehdi Sfia, MD
Peggy Boeckler, MD
Dan Lipsker, MD, PhD

Quality of Dermatologic Care Delivered by Physician Assistants: An Analysis of Prescribing Behavior for the Combination Antifungal Agent Clotrimazole-Betamethasone

Most patients with skin disease do not see a dermatologist. In an effort to better meet patients’ needs, there is growing use of physician assistants in dermatology. The quality of dermatologic care offered by physician assistants is not well characterized. Our group has used clotrimazole-betamethasone dipofoxane prescribing behavior as a measure of the quality of dermatologic services provided by practitioners in different specialties. Herein, to assess the quality of dermatologic care provided by physician assistants, we analyze clotrimazole-betamethasone prescribing behavior of 4 practitioner groups: dermatologists, dermatology physician assistants, primary care providers, and primary care physician assistants.

Methods. Data on the use of the combination antifungal agent clotrimazole-betamethasone were obtained from the 1995-2004 National Ambulatory Medical Care Survey and analyzed as previously described. First, we identified the 5 most common diagnoses that were treated with clotrimazole-betamethasone at least some of the time. Then we determined the percentage of visits for those 5 conditions at which clotrimazole-betamethasone was prescribed. Each patient visit was analyzed according to whether a physician, physician assistant, or both were involved in the visit. Direct supervision is defined as visits where patients were seen by both the physician assistant and the physician.

Results. There were an estimated 301 million outpatient visits for inflammatory or fungal skin conditions for which clotrimazole-betamethasone was sometimes prescribed. Most of the visits for these skin diseases were to primary care physicians (44.7%) and dermatologists (38.8%) (Table 1). Other subspecialty physicians accounted for 16.5% of these visits. In 95% of the visits, a physician was the only provider to see the patient. Both

Correspondence: Dr Lipsker, Clinique Dermatologique, Hopitaux Universitaires, 1 Place de l’Hopital, 67091 Strasbourg CEDEX, France (dan.lipsker@gmail.com).

Financial Disclosure: None reported.


Table 1. Proportion of Outpatient Visits Managed by Different Specialties for Inflammatory or Fungal Skin Conditions for Which Clotrimazole-Betamethasone Was Sometimes Prescribed

<table>
<thead>
<tr>
<th>Medical Care Provider</th>
<th>Estimated Visits, % (N = 301 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care physician</td>
<td>44.7</td>
</tr>
<tr>
<td>Dermatologist</td>
<td>38.8</td>
</tr>
<tr>
<td>Other subspecialty physician</td>
<td>16.5</td>
</tr>
<tr>
<td>Physician only</td>
<td>95.0</td>
</tr>
<tr>
<td>Physician assistant only</td>
<td>0.9</td>
</tr>
<tr>
<td>Physician and physician assistant</td>
<td>1.4</td>
</tr>
<tr>
<td>Other provider</td>
<td>2.7</td>
</tr>
</tbody>
</table>

aData from the 1995-2004 National Ambulatory Medical Care Survey.

Betamethasone was betamethasone dipropionate.

©2007 American Medical Association. All rights reserved.