Practice gaps between guidelines and clinical practice in the treatment of pediatric patients with acne: results of a single center, prospective study


University of California, San Diego, and Rady Children's Hospital

Practice gaps are a problem in acne management. Though one of the most common skin conditions in children and adolescents, there is tremendous variation in acne treatment amongst health care professionals.

Methods and Case-Based Questions

Participants were recruited at 3 educational conferences throughout the United States. They rated their knowledge of and confidence in prescribing according to the AARS guidelines on a 5-point scale. They also answered 5 case-based questions choosing the next best step for a variety of patients with acne.

1) A 16-year-old girl with 25 closed comedones on her face and a few inflammatory lesions (mild acne).
2) A 14-year-old boy with a moderate amount of inflammatory papules and pustules on the forehead, cheek, chin, chest, and back (moderate acne).
3) A 14-year-old girl with inflammatory papules and pustules on the forehead, cheek, chin, chest, and back (moderate acne).
4) A 14-year-old boy with a moderate amount of inflammatory papules and pustules on the forehead, cheek, chin, chest, and back (moderate acne).
5) A 15-year-old boy with extensive inflammatory lesions and a small amount of diffuse scarring on his face (severe acne). He has been using OTC salicylic acid wash.

Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female 54% (85), Male 46% (71)</td>
</tr>
<tr>
<td>Location</td>
<td>Suburban 57% (77), Urban 35% (47), Rural 8% (11)</td>
</tr>
<tr>
<td>Practice Setting</td>
<td>Pediatric Group 44% (59), Faculty Group 29% (39), Pediatric Solo Praction 18% (24), Pediatric Nurse Practitioner 1% (1)</td>
</tr>
<tr>
<td>Years in Practice</td>
<td>0-5 years 10% (12), 5-10 years 17% (22), 10-20 years 23% (29), &gt;20 years 45% (59)</td>
</tr>
</tbody>
</table>

Survey Results: Guideline Knowledge

Figure 1a. Self-Rated Knowledge of AARS Guidelines

Survey Results: Case-Based Exam

Figure 2. Percentage of Correct Answers to the Case-Based Exam

Survey Results: Guideline Knowledge

Figure 1b: Self-Rated Confidence in Prescribing According to the AARS Guidelines

Results, continued

Discussion

The AARS guidelines on pediatric acne management have not been well disseminated; almost 1/3 of providers reported “poor” knowledge of them, and only 2% of providers had “excellent” knowledge of them. Confidence in prescribing according to the guidelines was similarly low. These trends illustrate the importance of targeted interventions to improve provider knowledge of and confidence in using evidence-based guidelines.

Methodology

Though retinoids are a foundational acne treatment, only 50% of providers used them to treat mild acne in a teenager, and only 19% used them to treat mild acne in a pre-teen. This is an important topic for further education, as pre-adolescents tend to be comedone-predominant and would especially benefit from retinoid use. Further exploration of why pediatric providers are hesitant to use these products in adolescents with mild acne is needed.

Antibiotic trends were similar to those seen in retrospective studies (4), with antibiotic monotherapy remaining a small, but persistent problem. Four percent of providers chose to use topical antibiotics without benzoyl peroxide, illustrating the need for continued education on appropriate antibiotic use.

Finally, while most providers were able to choose a correct treatment regimen for mild acne, many had difficulty initiating treatment for moderate and severe acne, commonly omitting one or more elements of combination therapy. Only 57% of providers correctly treated moderate facial acne, and only 45% of providers correctly treated face and body acne. More education on this topic for pediatrics could benefit patients who have limited access to specialist care, or for those seeking a dermatology appointment.

Study limitations include the inability to evaluate the actual prescribing behavior of pediatric providers using a case-based exam.

References


Figure 3. Percentage of Providers Including a Retinoid in the Treatment Regimen

Case-Based Treatment Question

Figure 4. Errors in Management of Moderate Acne

Use of antibiotic monotherapy

- Use of a topical antibiotic without benzoyl peroxide

% of providers

18%