Inappropriate Interpretation of the Odds Ratio: Oddly Not That Uncommon
Dewesh Agrawal
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outside of the traditional medical system, this means an efficient interface and bidirectional communication with community-based resources is necessary. Last, if any office-based change is to be sustained, third-party reimbursement policies should reflect the importance of these changes.

We therefore praise Dr Pavan for her participation in an important learning collaborative. With equally laudable efforts in lobbying for fair reimbursement strategies and pursuing community-specific efforts around the integration of developmental services, we hope that someday children with developmental problems will be better served.

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REFERENCES

Cetaphil Cleanser (Nuvo Lotion) Cures Head Lice

To the Editor.—

When I published the preliminary results of my research on Nuvo lotion,1 I hoped that soon other researchers would independently evaluate and report on this new technique for treating head lice.2 The lotion is applied to the scalp, dried in place, and suffocates the lice. The reported results demonstrated a refreshingly simple way to cure head lice reliably: 96% effective, 94% long-term cure rate, nontoxic, and no extensive house clean-up or nit removal. The 96% cure rate reported for Nuvo lotion is superior to the cure rates most recently reported in the United Kingdom for permethrin (10%), malathion (17%), “Bug Busting” (57%), phenothrin (75%), and the newest pediculicide, dimethicone (73%).3,4 I have received >250 requests from health care practitioners from the United States and abroad for additional information about this treatment; however, no pharmaceutical company, university, or health care entity has stepped forward to perform such studies. I now have realized that practitioners who want independent information will need to try out the treatment themselves.

To make this treatment available to individual practitioners to try, I now announce that the lotion I used in my research as a “dry-on suffocation pediculicide” head-lice treatment was actually Cetaphil cleanser (Calderma Laboratories, LP, Fort Worth, TX). Cetaphil cleanser is indicated on its label for cleansing children’s skin and is available over-the-counter in pharmacies across the United States and abroad (distributed by the Galderma Laboratories family of multinational companies). Thus, practitioners in the United States, United Kingdom, Australia, Israel, and other areas with challenging head-lice problems can try this novel approach easily. To use the product for my research we purchased the Cetaphil cleanser as the prototype lotion to test this concept because the formulation seemed likely to have the properties required to work as a dry-on suffocation pediculicide to treat head lice.

Although worthwhile enhancements can be achieved by reformulating this prototype lotion, Cetaphil cleanser itself proved to be quite an effective pediculicide in my research. My work was fully independent without any financial or other association with Calderma. For additional details on the practical use of Cetaphil cleanser lotion to treat head lice, please visit their Web site www.Nuvoforheadlice.com.

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REFERENCES

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To the Editor.—

I applaud the work of Must et al3 for clarifying the effects of premenarchal weight and maturational timing on adult weight status. However, the interpretation offered of the odds ratio of 7.7 from their Table 4 is somewhat misleading: “Girls who were overweight before menarche were 7.7 times more likely to be overweight as adults.”

To understand why this interpretation is inappropriate, one must first understand the difference between a risk ratio (relative risk [RR]) and an odds ratio (OR). An RR is the ratio of the risk of an event among an exposed population to the risk among the unexposed. An OR is the ratio of the odds of an event in an exposed group to the odds of the same event in a group that is not exposed.3,4 RRs can be interpreted literally as increased or decreased likelihood of an event between exposed and unexposed populations. In other words, an RR of 7.7 can be interpreted as “the event was 7.7 times more likely to occur in the exposed population than in the unexposed population.” However, ORs are difficult to comprehend directly and should not be interpreted (as commonly done) as being equivalent to the RR.3 Thus, the OR of 7.7 from the Must et al study cannot be interpreted as “7.7 times more likely.” It would have been more appropriate for the authors to state instead that “girls who were overweight before menarche were more likely to be overweight as adults (OR: 7.7; 95% confidence interval: 2.3–25.8).”

If the OR is interpreted inappropriately as an RR (as was done in this study), it will always overstate the effect size. In fact, the higher the event rate, the more the divergence between the OR and the RR.3 In other works, the higher the proportion is of premenarchal overweight girls that were overweight as adults, the more that relative risk will be less than 7.7. Thus, the RR in this study is likely to be significantly less than 7.7.
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Eczema and Postvaccination Varicella Breakthrough

To the Editor.—

The authors of the article “Importance of Catch-up Vaccination: Experience From a Varicella Outbreak, Maine, 2002–2003” from the April 2005 issue of Pediatrics investigated the causes of a varicella outbreak in an elementary school, including vaccine failure.1 They noted that a history of eczema was associated with an increased risk for vaccine failure (relative risk: 4.3; 95% confidence interval: 0.8–23.5; N = 3), although there was not statistical significance and the numbers were small. They suggested that a poorer immune response caused by the disease itself or steroid therapy were plausible explanations. This prompted us to look at the Worldwide Adverse Experience System database,2 the company’s repository for adverse-experience data, to conduct an analysis by using all the available data of cases of varicella breakthrough postvaccination in patients with the medical condition of eczema.

METHODS

Proportional reporting ratios (PRRs), an approach that uses quantitative methods to evaluate spontaneous reports for potential signals, were used for this analysis.3

A PRR was calculated by comparing the proportional reporting rate for reports that include a medical condition of eczema (N = 101) to the proportional reporting rate for reports that do not contain a medical condition of eczema (N = 17 175).

RESULTS

A PRR was calculated as seen in Table 1.

DISCUSSION

The expected, or null, value for a PRR is 1.0.3 The PRR of 1.15 indicates that the reporting rates are similar and that there is not a statistically significant difference in the reporting rates between the 2 groups. Thus, an analysis that takes into account all the available reports supports the results of Marin et al, which indicated that there is no evidence of a statistically significant association between a medical history of eczema and an increased rate of breakthrough varicella postvaccination.

TABLE 1. Varivax Adverse Experience Reports: Medical Condition of Eczema and Breakthrough Varicella

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<th>Reports With Medical Condition of Eczema</th>
<th>Reports Without Medical Condition of Eczema</th>
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<tr>
<td>Reports with breakthrough varicella</td>
<td>N = 29</td>
<td>N = 429</td>
</tr>
<tr>
<td>Reports without breakthrough varicella</td>
<td>N = 72</td>
<td>N = 12 883</td>
</tr>
<tr>
<td>PRR</td>
<td>0.287 (N = 101)</td>
<td>0.250 (N = 17 175)</td>
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PRR = 29/(72 + 29) divided by 4292/(4292 + 12883) = 1.15 (with a 95% confidence interval: 0.84–1.56).

CONCLUSIONS

This analysis demonstrates that the reporting rate of breakthrough varicella in children with eczema is similar to that in children without eczema in their medical history. Although PRR is but one tool available for the assessment of postmarketing spontaneous reports, it may be a useful adjunct in the evaluation of a potential signal.

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Evidence Does Not Support American Academy of Pediatrics Recommendation for Routine Imaging After a First Urinary Tract Infection

To the Editor.—

Cohen et al1 recently reported on adherence to American Academy of Pediatrics (AAP) guidelines for imaging after urinary tract infections in the Washington State Medicaid program in 1999–2000. They found that less than one third of children with urinary tract infections diagnosed in the first year after birth received the recommended imaging and that children treated as outpatients were less likely to receive such imaging. They concluded that, "given the trend toward increased outpatient management of urinary tract infections, increased attention to outpatient imaging may be warranted.”

However, if something is not worth doing, it is not worth doing well.2 The AAP recommendation that young children be imaged with ultrasound and voiding cystourethrogram after a first febrile urinary tract infection was based on evidence that was generously labeled as “fair” at the time. In response to a letter questioning the basis for these recommendations,3 Roberts et al of the AAP guideline committee acknowledged that the AAP Executive Board had similar concerns and that the imaging recommendation was "based more on Subcommittee consensus than on evidence.”4 More recently, Roberts indicated that the imaging recommendations should be reconsidered.5

It would be a shame if, as the evidence for routine ultrasonography and voiding cystourethrogram is being increasingly questioned,6–10 the prestige of the authors of this article led clinicians to perceive more, rather than less, need to adhere to the AAP’s 1999 imaging recommendations. The lack of adherence reported by Cohen et al is more a cause for celebration than concern.

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