

of allergy testing depends greatly on the accuracy of detecting IgE on the surface of mast cells, the size and reproducibility of histamine-positive reaction at specific concentrations, the device selected, the body site evaluated, technician skill, and several other factors.<sup>3</sup>

Our results suggest that using 6 mg/mL of histamine as a positive control can lead, under certain conditions, to reduced sensitivity of allergy skin testing. This error could potentially have catastrophic effects when diagnosing those with food allergy or life-threatening drug reactions. From a clinician's standpoint, it may be dangerous to rely clinically on skin test results if 6 mg/mL of histamine is used as a positive control because the result may be inaccurate. More studies are needed to confirm this conclusion, but the trustworthiness of a negative allergen skin test result should come into question in this scenario.

## Do we need to keep playing this tune?

Seghezzo and colleagues<sup>1</sup> add to the many other studies that report that 2 doses of dexamethasone and 5 to 7 days of prednisone or prednisolone therapy are associated with no detected difference in relapse or readmission. The implication of that study is that 2 doses of 0.6 mg/kg of dexamethasone (equivalent to 3 mg/kg of prednisolone from standard corticosteroid equivalency tables) matches the efficacy of 5 to 7 days of 1 or 2 mg/kg of prednisone or prednisolone. However, the absence of a placebo in this and other studies cannot distinguish equal efficacy from equal inefficacy. Although some may consider efficacy of corticosteroids for acute asthma self-evident, that is not a supportable assumption. In a placebo-controlled study, no difference in physiologic measurements or clinical outcome compared with placebo was reported in children hospitalized because of acute asthma.<sup>2</sup> In another report of a placebo-controlled evaluation of children hospitalized for acute asthma, no discernible improvement in airway obstruction or clinical outcome was seen.<sup>3</sup> Corticosteroids have also been reported not to affect the clinical outcome in adults with asthma admitted to an intensive care unit.<sup>4</sup> Studies have specifically questioned the efficacy of corticosteroids for preschool-age children with viral respiratory infection-induced asthma.<sup>5,6</sup> Of course, other placebo-controlled trials have documented considerable efficacy for corticosteroids in the treatment of acute symptoms of asthma.<sup>7–10</sup>

Differences in the various studies include the potential for spontaneous improvement of acute asthma that matches or exceeds the rate of improvement potentially provided by corticosteroids. Sometimes you can't beat mother nature! Dosage must also be considered when evaluating efficacy. The study by Seghezzo and colleagues,<sup>1</sup> similar to that reported in previous studies, included a dose of dexamethasone equivalent to 3 mg/kg of prednisolone and compared that with 1 or 2 mg/kg of prednisone or prednisolone for 5 to 7 days. Their study and others do not eliminate the possibility that 2 doses

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of 3 mg/kg of prednisone or prednisolone would provide the same outcome as the dexamethasone dose of 0.6 mg/kg.

Comparative studies of corticosteroids for acute asthma should consider both dose equivalency and placebo if meaningful results are to be expected. On the other hand, do we need more studies like this? Corticosteroids are unequivocally effective for acute asthma, although that may not be apparent for patients who spontaneously improve rapidly.

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