Atopic dermatitis (AD) is an inflammatory skin condition affecting 1%–23% of 1%–23% of children in the United States. In some cases, AD can be severe, affecting up to 10% of children. The skin condition is characterized by itchy and inflamed skin, which can lead to discomfort and impaired quality of life. Despite the availability of various treatments, only 25% of patients who complete a trial see long-term improvement in skin condition. Patients who discontinue their treatment due to lack of efficacy or side effects represent a significant challenge for healthcare providers.

**Methods**

- **Patients and Study Design:** Eligible patients aged 2 to 12 years with AD for at least 6 weeks and in need of treatment with a corticosteroid or at least weekly moisturizer were enrolled. The study included a 6-week treatment period (Week 4 follow-up visit) and a follow-up period. A total of 29 patients were enrolled and treated with ruxolitinib cream for 4 weeks. The dosage was escalated from 0.02% to 0.5% to 2% across the study period.

- **Efficacy and Safety:** The primary outcome was change in Investigator’s Global Assessment (IGA) score from baseline to Week 4 for patients with a baseline IGA score of ≥4. Secondary outcomes included improvements in pruritus, rash, and nighttime AD activity. Adverse events were monitored throughout the study.

- **Results:**
  - **Disease Activity and Improvement:**
    - Mean IGA at baseline was 4.8 (range 4–6). At Week 4, IGA improved to 1.9 (range 0–4), indicating a significant reduction in AD severity.
    - **Statistical Analysis:**
      - Treatment with ruxolitinib cream led to a statistically significant improvement in IGA score at Week 4 compared to baseline (p < 0.001).

- **Safety and Tolerability:**
  - **Adverse Events:** A total of 28/29 patients completed Week 4 (1 withdrew by parent/guardian). The most common adverse events were pruritus, rash, and nighttime AD activity. No serious adverse events were reported.
  - **Clinical Laboratory Values:** Hemoglobin, platelets, and neutrophils were measured at baseline and Week 4. There were no clinically significant changes in these parameters across the study period.

- **Conclusion:** Ruxolitinib cream is a promising treatment option for pediatric AD, showing significant improvements in disease activity and safety profile.

**Acknowledgments:** This study was supported by Incyte Corporation. The authors declare no conflicts of interest.

**References:**


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