Poor Control of Atopic Dermatitis in Young Children in the United States: Results from the EPI-CARE Survey

Eric L. Simpson[1], Jonathan I. Silverberg[2], Stephan Weidinger[3], Lysel Brignoli[4], Ryan B. Thomas[5], Chien-Chia Chuang[6], Ana B. Rossi[6]

[1]Oregon Health & Science University, Portland, OR; [2]George Washington University School of Medicine and Health Sciences, Washington, DC; [3]Christian-Albrechts-University Kiel, University Hospital Schleswig-Holstein, Kiel, Germany; [4]Cerner Enviza, Paris, France; [5]Regeneron Pharmaceuticals Inc., Tarrytown, NY; [6]Sanofi, Cambridge, MA, USA

Background: Atopic dermatitis (AD) affects approximately 10% of children aged 6 months to less than 6 years in the United States (US), but there is a paucity of information on disease control.

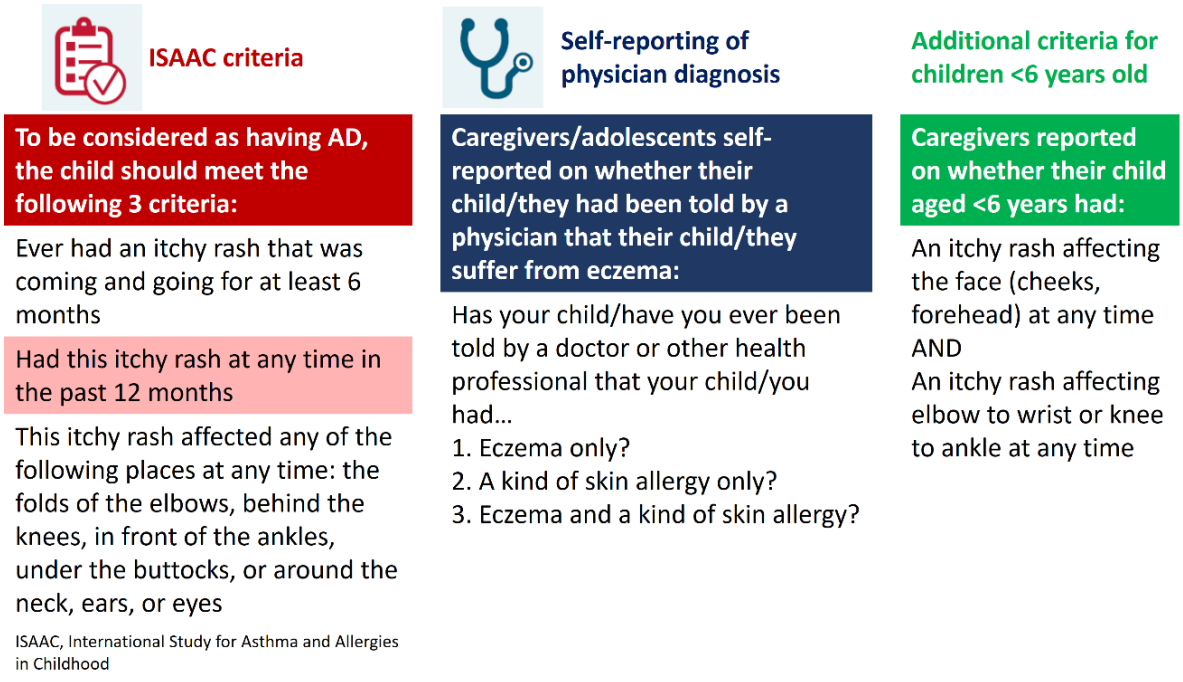
Methods: Designed to be representative of the general pediatric population, EPI-CARE is a cross-sectional, web-based, self-reported survey of children aged 6 months to less than 18 years and their parents/guardians that was conducted in 18 countries in 5 geographical regions. Herein, we report data for children aged 6 months to less than 6 years from the US. In this age group, eligible children had "diagnosed AD" based on meeting all items of the International Study of Asthma and Allergies in Childhood criteria; parent/guardian-report of ever being told by a physician that their child had eczema and an itchy rash affecting the face (cheeks, forehead) and elbows–wrist/knee–ankle at any time (Figure). We present data related to a lack of AD control, as measured by parent/guardian-reported number and duration of flares and AD-related emergency room visits and hospitalizations by disease severity (parent/guardian-reported clear/mild, moderate or severe AD in the previous week). Within each subgroup, we report the number and duration of each flare (defined as increased itching/redness and/or new/spreading lesions) during the previous month, and AD-related emergency room visits and hospitalizations during the last 12 months.

Results: Among 147 young children aged 6 months to less than 6 years with "diagnosed AD", 62.0% had parent/guardian-reported clear/mild AD, 31.1% moderate AD and 7.0% severe AD in the previous week. Most children had at least 1 flare in the previous month (clear/mild: 86.0%; moderate: 95.3%; severe: 100%), with many having 2 or more flares (38.8%, 67.0% and 100%, respectively), and some having 3 or more flares (19.9%, 32.1% and 59.6%, respectively). The average duration of flares in the past month also increased with AD severity, with "at least 1 week" reported

for 56.6% of those with clear/mild AD, 74.7% of those with moderate AD and 100% of those with severe AD; “at least 2 weeks” for 15.2%, 17.8% and 58.6%, respectively; and “at least 3 weeks” for 3.7%, 6.7% and 19.7%, respectively. Overall, 21.8% of children visited the emergency room and 23.1% were hospitalized for AD-related reasons in the past year, with a proportion that tended to be higher among children with severe AD.

Conclusions: These substantial flare, emergency room and hospitalization rates in young children (6 months to less than 6 years) with AD indicate poor disease control in this age group in the US. The fact that even patients with “clear/mild” AD had high rates of hospitalization due to AD during the last year is not surprising, as parents/guardians based disease severity on the previous week and AD is a chronically relapsing disease with a fluctuating natural course. Poor disease control in this age group adversely impacts the lives of patients and their families. Therapeutic options for AD with efficacy and safety data may help address this important medical need.

Figure. Criteria for diagnosed AD



Acknowledgments

Research sponsored by Sanofi and Regeneron Pharmaceuticals, Inc. Medical writing/editorial assistance was provided by Amy O’Callaghan, PhD, of Excerpta Medica, and was funded by Sanofi and Regeneron Pharmaceuticals, Inc., according to the Good Publication Practice guideline.

Disclosures

Simpson EL: Amgen, BMS, Chugai, Galderma, Genentech, Lilly, Medimmune, Sanofi/Regeneron Pharmaceuticals, Inc., Tioga Pharmaceuticals, Vanda Pharmaceuticals – grants/research support; Anacor Pharmaceuticals, BMS, Galderma, Genentech, Medicis Pharmaceutical, Merck, Sanofi/Regeneron Pharmaceuticals Inc. – consultant. **Silverberg JI:** AbbVie, AnaptysBio, Asana Biosciences, Eli Lilly, Galderma, GSK, Glenmark, Kiniksa Pharmaceuticals, LEO Pharma, MedImmune, Menlo Therapeutics, Pfizer, PuriCore, Regeneron Pharmaceuticals, Inc., Sanofi – consultant, and/or received grants/honoraria. **Weidinger S:** German Atopic Dermatitis Registry TREATgermany – co-principal investigator; LEO Pharma, L'Oreal, Novartis, Pfizer – institutional research grants; Incyte, LEO Pharma, Novartis, Regeneron Pharmaceuticals, Inc., Sanofi – consultancies; Abbvie, Galderma, LEO Pharma, Regeneron Pharmaceuticals, Inc., Sanofi – lectured at educational events; clinical trials with many pharmaceutical industries that manufacture drugs used for the treatment of psoriasis and atopic eczema. **Brignoli L**: Cerner Enviza (a company which received research funds from Sanofi/Regeneron Pharmaceuticals, Inc. during the conduct of the study) – employee. **Thomas RB**: Regeneron Pharmaceuticals, Inc. – employee and shareholder. **Chuang CC, Rossi AB:** Sanofi – employees, may hold stock and/or stock options in the company