15109

Cutaneous zygomycosis presenting as resistant intertrigo in an immunocompromised adult

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A man in his 60s with well controlled HIV and type 2 diabetes mellitus presented with foul-smelling, pruritic, erythematous plaques and satellite pustules over his bilateral axillae, medial thighs, and groin. His symptoms failed to improve after lengthy courses of topical antifungal agents, extended courses of fluconazole, topical and oral antibiotics, and topical corticosteroids. Fungal culture from a swab of the inguinal crease was positive for zygomycetes. Two repeat skin biopsies did not reveal invasive fungal infection. He was empirically started on oral posaconazole 400 mg twice daily, chlorhexidine washes and topical clindamycin. PCR testing revealed the species Mucor circinelloides, susceptible to posaconazole. After two months of posaconazole therapy, he had complete resolution of his intertrigo and associated symptoms. Zygomycosis, also known as mucormycosis, is an opportunistic, angioinvasive fungal infection caused by Zygomycetes. The most frequent form of zygomycosis is rhinocerebral (34%-49%), followed by cutaneous (10%-22%). Cutaneous zygomycosis is characterized by necrotic eschars in an immunocompromised host. The most commonly reported cutaneous zygomycosis species is *Rhizopus oryaze* in 47%-85% of cases. Mucor species have less commonly been identified as pathogens in human disease, likely due to their suboptimal growth at 37°C. Reports of the organism localized to the cutaneous and subcutaneous layers only may be explained by the fact that the optimal growth of M. circinelloides is 30°C. Zygomycosis should be considered in the differential diagnosis of intertriginous rash in immunocompromised hosts resistant to conventional therapies.

Commercial disclosure: None identified.

15115

The patient-reported disease burden in pediatric patients with atopic dermatitis: A cross-sectional study in the United States, Canada, Europe, and Japan

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Background: This study describes AD burden in children aged 6-11 years.

Methods: This cross-sectional, web-based, parent-report survey was performed in the United States (US), Canada, France, Germany, Italy, Spain, United Kingdom (UK), and Japan. Children (6-11 years) with AD (self-report of a physician diagnosis of AD [eczema with/without skin allergy] and positive on ISAAC criteria) were stratified as mild/moderate/severe AD based on Patient Global Assessment (PGA) in past week: US, n = 187/83/13; Canada, n = 52/25/6; France, n = 163/89/9; Germany, n = 42/33/1; Italy, n = 208/111/13; Spain, n = 152/60/10; UK, n = 152/62/6; Japan, n = 156/43/5. Patients reported itch, sleep, pain in past 24 h (Numerical Rating Scale [NRS], 0-10, higher score = worse signs/symptoms), health-related quality of life (HRQoL) in past 7 days (Children's Dermatology Life Quality Index [CDLQI], 0-30, higher score = lower HRQoL), comorbidities, and missed school days in past 4 weeks.

Results: The sample was representative of the general population for age, gender, regions, and urban/rural split. Itch, pain, sleep, and HRQoL worsened with higher disease severity (mean score ranges for mild/moderate/severe AD: itch: 2.1-3.7/4.6-6.1/5.0-7.8; sleep: 2.0-4.0/4.0-5.8/5.0-7.8; pain: 1.8-3.5/3.4-5.7/5.0-8.4; CDLQI: 3.4-10.7/7.5-15.9/12.0-23.0). Across all countries, 77.1%-88.2%, 73.9%-97.0% and 84.1%-100.0% of mild, moderate and severe AD patients, respectively, reported ≥ 1 atopic comorbidity; hay fever (46.7%-69.9%/35.6%-79.3%/48.3%-100.0%) and asthma (31.3%-60.2%/42.9%-65.0%/32.5%-100.0%) were most common. Missed school days ranged 1.1-6.3/3.5-7.9/5.6-10.9 for mild/moderate/severe AD patients.

Conclusions: The disease burden imposed by AD on children (6-11 years) is substantial across countries and multiple domains, including itch, sleep, pain, HRQoL, comorbidities, and missed school days. Although limited by small sample size in the severe subgroup, disease burden generally increased with severity.

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15117

Quality of life impact in adolescent patients with moderate to severe atopic dermatitis: Screening data from the LIBERTY AD ADOL trial

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Background: Dupilumab is approved in certain patients with AD, asthma, and chronic rhinosinusitis with nasal polyposis. We report on quality of life (QoL) at screening in adolescents with AD (12-17 years) from a randomized, double-blind, placebo-controlled, phase 3 study (LIBERTY AD ADOL; NCT03054428).

Methods: The majority of patients (n = 251) had asthma, allergic rhinitis or food allergy (61.0%, 66.1%, 62.5%, respectively). In addition, they had IGA ≥3, EASI ≥16, Peak Pruritus NRS (PNRS) ≥4, affected, and BSA ≥10%, and were inadequately controlled on topical medication. We report itch (mean Peak Pruritus NRS), sleep loss (mean SCORAD VAS), symptoms (symptoms for ≥5 days/week on individual items of the POEM questionnaire), and QoL (response 'very much'/ 'quite a lot' on the CDLQI questionnaire) at screening to determine real-world QoL prior to protocol-mandated washout.

Results: At screening, mean PNRS score was 7.2; mean SCORAD VAS sleep loss score was 4.9. The proportion of patients experiencing symptoms for ≥5 days/week were: itch (94.4%), dry/rough skin (93.2%), flaking-off (78.1%), cracked skin (74.1%), disturbed sleep (56.6%), bleeding (53.4%), and weeping/oozing (31.5%). The proportion of patients responding 'very much'/'quite a lot' for CDLQI items were: itchy/sore/painful/stinging skin (88.0%); affected sleep (59.8%); embarrassed/self-conscious (50.6%); influenced clothes you wear (40.6%); affected leisure activity (40.6%); how much a problem is treatment (40.6%); problem at school or holiday (40.2%); made it difficult to do sports (37.1%); problem with other people (13.1%); and affected friendship (9.6%).

Conclusions: Adolescents with moderate to severe AD in this trial had a substantial, multidimensional QoL impact at screening.

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15119

Reducing the pain of intramuscular benzathine penicillin injection in syphilis by using 1% lidocaine as a diluent: A prospective, randomized, double-blinded trial study

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Background: According to the Centers for Disease Control and Prevention 2015 sexual transmitted disease treatment guidelines, Benzathine penicillin G (BPG) is the recommended first-line treatment for the treatment of syphilis. In our general practice, using lidocaine as the diluent of BPG causes pain at the injection sites. This study aimed to compare the effect of BPG diluted in 1% lidocaine versus that diluted in sterile water on injection sites.

Methods: Forty subjects with primary and secondary syphilis received BPG intramuscular injection. The right or left gluteal area was randomized to an injection of 1.2 million-unit BPG diluted with 4 mL lidocaine. Contralateral gluteal was an injection of 1.2 million-unit BPG diluted with 4 mL sterile water. The pain was measured using the numeric rating scale immediately, 5 minutes, 20 minutes, and 1 day after the treatment.

Results: There were statistically significant reductions in pain with BPG diluted in lidocaine at 0, 5, and 20 minutes after the treatment ($P < .001$).

Conclusions: We recommend the use of 1% lidocaine as the diluent of BPG for the treatment of syphilis.

Commercial disclosure: None identified.