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Online case-based education improves dermatologists' knowledge and confidence in introducing novel agents for psoriasis into clinical practice



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Background and Objective: The treatment landscape in psoriasis is evolving at a rapid pace. We assessed whether an online case-based CME activity could improve dermatologists' confidence in integrating newer therapies into clinical practice.

Methods: Dermatologists participated in a segmented, online multi-media activity consisting of videos portraying realistic physician-patient interaction followed by a test question and expert commentary. Educational effect was assessed using a repeated-pair design, pre-/post-assessment. A chi-square test of independence determined if a statistically significant improvement (5% significance level, $P < .05$) existed in the number of correct responses between the pretest and posttest scores. Cramer V estimated the effect size of the education. The activity launched 15 February 2019 with data collection through 22 March 2019.

Results: 11% of dermatologists ($n = 100$) answered all 3 questions correctly at baseline rising to 69% at post assessment. Significant improvements in appropriate treatment choice for a patient with PSO affecting her legs, palms and nails who is failing on methotrexate (193% improvement, $P < .001$), and for the same patient who subsequently experiences worsening skin disease and signs of psoriatic arthritis following initial success with adalimumab (76% improvement, $P < .001$). Extensive educational impact ($V = 0.354$) with 45% of dermatologists reporting greater confidence in optimizing clinical outcomes in patients with moderate to severe PSO using IL-17 inhibitors (average confidence shift 22%)

Conclusions: Participation in a segmented online multi-media activity significantly improved dermatologists' clinical decisions. Further case-based learning would reinforce confidence in integrating new treatment options into clinical practice.

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Prevalence of prurigo nodularis in the United States



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Background: Prurigo nodularis (PN), a chronic condition characterized by highly pruritic nodular skin lesions, poses significant challenges for treatment and patient quality of life. Prevalence data are scarce. We calculated US PN prevalence rates using available epidemiologic data.

Methods: Prevalence rates were calculated using diagnosis data from the National Ambulatory Medical Care Survey (NAMCS), Medicare hospital insurance and medical insurance data, and two claims databases (Symphony Health and LexisNexis).

Results: Estimated 2017 prevalence in a total US population of 326 million was 0.037% (119,553 PN patients) and 0.044% (143,038 PN patients), calculated using LexisNexis and Symphony Health ICD-9 data, respectively. Medicare 2017 data showed a prevalence of 0.148% (83,500 PN patients in a total Medicare population of 56.3 million), the higher estimated prevalence being due to the generally older population in that database. Using NAMCS ICD-9 data, estimated 2010 prevalence was 0.041% (129,029 PN patients in a total population of 314 million) and estimated 2015 prevalence was 0.060% (193,276 PN patients in a total population of 321 million), a 46% increase. Accounting for shifts in the US population's age distribution, better disease definition and diagnosis, and increased awareness due to more clinical studies on the disease over this period, the data could indicate improved diagnosis during the past decade.

Conclusions: Based on available epidemiologic data, there is a substantial number of PN patients in the US. Increased clinical activities, improved disease awareness, and coding optimization will further improve future diagnosis.

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Sixteen-week efficacy and safety results of 93 patients treated with dupilumab for moderate to severe atopic dermatitis



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Despite promising efficacy and safety results demonstrated by dupilumab for the treatment of moderate to severe atopic dermatitis in clinical trials, our understanding of dupilumab in clinical practice remains limited in literature. Real-world studies are especially important with strict inclusion and exclusion criteria of RCTs limiting generalizability of data to patients in everyday practice. Therefore, a retrospective chart review was conducted of consecutive patients on dupilumab from December 2017 to May 2019 at 2 Canadian tertiary hospitals. We present the final efficacy and safety results of 93 patients who met inclusion criteria (≥ 18 years of age, baseline Investigator's Global Assessment (IGA) ≥ 3). Sixteen patients used concomitant systemic therapy, with majority using systemic therapy as a bridging treatment to dupilumab to minimize flares. Fifty-one out of 93 patients (55%) reached primary efficacy end point (IGA 0/1 at week 16). Thirty-eight patients (41%) reported at least 1 adverse event (AE). Conjunctivitis was the most common AE ($n = 18$), followed by dry eyes ($n = 6$), and arthralgia ($n = 4$). There were no cases of serious AEs or any discontinuations due to an AE. Results from this study demonstrate efficacy of dupilumab in the setting of everyday clinical practice with 55% of patients meeting IGA 0/1 at week 16. In addition, no new safety concerns were reported with lower proportion of patients reporting ≥ 1 AE compared with RCTs (41% vs 65%-88%). These estimates further fill the gap in literature and may offer dermatologists with greater insight to make informed treatment decisions and optimize care of patients on dupilumab.

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16286

A case of acute myeloid leukemia during adalimumab treatment in a patient with psoriatic arthritis



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Adalimumab, a fully human anti-tumor necrosis factor alpha (TNF- α) monoclonal antibody, which has been successfully used in the treatment of several immune-mediated disorders including psoriasis. Hematologic malignancies or lymphoproliferative disorders associated with the use of TNF- α inhibitors in psoriatic patients have been reported. A 62-year-old male patient presented with plaque psoriasis for 20 years' duration. Although he had received narrowband ultraviolet B phototherapy for 3 years and oral methotrexate for 6 months, none of them were satisfactory. The patient also complained of pain in multiple joints and onycholysis. Psoriatic arthritis was diagnosed based on the Classification criteria for psoriatic arthritis (CASPAR). He started to receive the treatment of subcutaneous injection of adalimumab 40 mg according to the dosing schedule of plaque psoriasis. During loading dose and initial 6 months, psoriatic skin lesion and arthralgia improved gradually. After 16 injections of adalimumab, the patient complained of myalgia, headache, and fatigue. Blood tests showed marked leukocytosis, anemia and low platelet counts, and the blast count was 45%. The patient was diagnosed with acute myeloid leukemia (AML) by additional bone marrow tests. We report this case of AML during the treatment with adalimumab to raise the awareness of the rare possibility of hematologic malignancy.

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