14995

The efficacy of a noninvasive 1060-nm diode laser for medial knee fat reduction

Panittra Suphatsathienkul, MD, Rungsima Wanitphakdeedecha, MD, MA, MSc, Department of Dermatology, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand

Background: Noninvasive body contouring is a rapidly growing field in cosmetic dermatology. Medial fat knees are a frustrating esthetic deformity exacerbated by genetic predisposition and resistance to diet. There are only few noninvasive options to remove fat at this area.

Objective: To evaluate the efficacy of a noninvasive 1060-nm diode laser for medial knee fat reduction.

Methods: Nineteen participants with fat knees were enrolled into this study. All of them were treated with 1060-nm diode laser at medial side of their knees for one session with the energy setting of 1.0-1.4 W/cm^2, depending on patients' tolerance. Body weight, knee circumference at 3 cm above the medial epicondyle of the femur, and fat thickness measured by ultrasonography, were recorded before and 1, 3, and 6 months after treatment.

Results: All participants were female, with a mean age of 32.3 $\pm$ 5.3 and the body weight of 59.8 $\pm$ 11.6. The average energy setting was 1.3 $\pm$ 0.1 W/cm^2 with pain score of 6.1 $\pm$ 1.0. There was no statistic significant change in body weight at all visits. However, there were significant reduction in knee circumferences ($P < .001$) at every visit, and knee fat thickness measured by ultrasound in both axial and sagittal plane at 1, 3 and 6 months after treatment ($P = .036$ and $P < .001$). The side effects found in this study were mild and limited to tenderness and erythema immediate after treatment.

Conclusions: 1060-nm diode laser is safe and effective for medial knee fat reduction. However, the higher number of patients and the longer term of follow-up are needed.

Commercial disclosure: None identified.

15002

Higher prevalence of comorbidities, comedications, and biologic discontinuation in female psoriasis patients in the real world

Shannon Grabich, PhD, Anna Sheahan, PhD, Richard Baxter, Robert Suruki, ScD, UCB Pharma

Introduction: A better understanding of patient characteristics and clinical factors contributing to discontinuation of biologics among psoriasis (PSO) patients is necessary to identify opportunities to improve treatment approaches. This study describes comorbidities, comedications, and discontinuation in PSO patients newly initiating biologics in the real-world, including gender differences.

Methods: This retrospective cohort study analyzed US commercial claims data from 2012-2017. Index date was the first claim for a biologic or small molecule (apremilast) during the study period. Eligible patients were ≥18 years, had a PSO diagnosis, no biologic use for ≥12 months preceding index date, and continuous enrollment in the 12 months preceding (baseline) and following (follow-up) index date. Comorbidities and PSO diagnoses were based on ICD9/10. 12-month discontinuation was defined as >90 days without an index biologic.

Results: A total of 1769 PSO patients met the inclusion criteria; 854 (48%) were female. The most common index biologics were adalimumab and etanercept. The proportion of patients discontinuing treatment within 12 months was 53%, but was higher in females than males (57% vs 50%). Females were more likely than males to have claims at baseline for anxiety (16% vs 8%), depression (21% vs 9%), fatigue (21% vs 15%), and rheumatoid arthritis (10% vs 5%), as well as opioids (43% vs 32%).

Conclusions: Females had more comorbidities, higher opioid use, and higher biologic discontinuation rates, compared with males. Further studies exploring drivers of discontinuation, particularly in females, are needed to identify opportunities to optimize PSO treatment.

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15005

Acute cutaneous graft-versus-host disease compared with other maculopapular eruptions in bone marrow transplant patients

Kanchana Leerunyakul, MD, Kumutnart Chanprapaph, Suthinee Rutnin, MD, Division of Dermatology, Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Background: Establishing the diagnosis of acute graft-versus-host disease (GVHD) is challenging.

Objective: This study aims to compare the clinical characteristics and histopathologic features between acute cutaneous GVHD and other MP eruptions and to determine prognostic factors regarding acute GVHD severity, morbidity, and mortality.

Methods: A retrospective analysis of cutaneous presentations, histopathologic features, and extracutaneous involvement in patients who developed MP rash after hematopoietic stem cell transplantation.

Results: Ninety-five patients were included. Sixty-nine patients had acute cutaneous GVHD, while 26 had other MP eruptions. Palms (50.7%) or soles (40.6%) involvement was significantly more frequent in acute GVHD group ($P < .01$). Necrotic keratinocytes locating in stratum basale (92.3%) and stratum spinosum (84.6%), diffuse basal vacuolization (38.5%), lymphocyte satellitosis (53.8%) and subepidermal cleft (38.5%) were histopathologic features suggesting acute GVHD ($P < .05$). Diarrhea alone (47.8%) or accompanied by hyperbilirubinemia (27.5%), and newly developed transaminitis (37.7%) significantly favored the acute GVHD group ($P < .01$). Subgroup analyses among acute GVHD patients demonstrated that mucosal involvement and/or blister formation were associated with severe disease ($P < .01$). Higher skin and overall acute GVHD grading correlated with longer time to rash resolution ($P < .01$), hospital stays ($P < .01$) and higher mortality ($P < .05$).

Conclusions: The clinical characteristics, specific histologic changes, and laboratory findings in this study would be beneficial for the diagnosis of acute cutaneous GVHD. The morbidity and mortality of acute GVHD were determined by the extent of skin and extracutaneous involvement.

Commercial disclosure: None identified.

15013

Dupilumab improves signs, symptoms, and quality of life in adolescents with moderate to severe atopic dermatitis

Lawrence F. Eichenfield, University of California and Rady Children's Hospital, San Diego, California; Jonathan I. Silverberg, MD, PhD, MPH, George Washington University School of Medicine; Abhijit Gadkari, Regeneron Pharmaceuticals; Isabelle Guillemin, Zhen Chen, PhD, MA, MS, Sanofi; Ashish Bansal, MD, Regeneron Pharmaceuticals; Laurent Eckert, PhD, Sanofi; Karli Rosner, MD, PhD, Sanofi Genzyme

Background: Dupilumab is approved in certain patients with atopic dermatitis (AD), asthma, and chronic rhinosinusitis with nasal polyposis. We report the effect of dupilumab on AD severity, signs, symptoms, and quality of life (QoL) in adolescents from a randomized, double-blind, placebo-controlled study (LIBERTY AD ADOL; NCT03054428).

Methods: 251 patients (aged 12-17 years) were randomized 1:1:1 to subcutaneous dupilumab 200 mg/300 mg (<60 kg/≥60 kg body weight) every 2 weeks (q2w), 300 mg every 4 weeks (q4w), or placebo for 16 weeks. Proportion of patients with an Investigator's Global Assessment (IGA) score 0/1, improvement from baseline in Eczema Area and Severity Index by 50% (EASI-50), 75% (EASI-75), and 90% (EASI-90), clinically meaningful improvement (≥6 point) in Patient-Oriented Eczema Measure (POEM) and Children's Dermatology Life Quality Index (CDLQI), ≥4-point change in Peak Pruritus Numerical Rating Scale (NRS), least squares (LS) mean change in affected body surface area (BSA), and safety outcomes (in patients who received ≥1 dose of the study drug) were assessed.

Results: At week 16, significantly more dupilumab-vs placebo-treated patients achieved (q2w/q4w/placebo): IGA 0/1, 24.4%/17.9%/2.4% ($P < .0001$/$P = .0007$, vs placebo); EASI-50, 61%/54.8%/12.9%; EASI-75, 41.5%/38.1%/8.2%; EASI-90, 23.2%/19%/2.4%; POEM ≥6-point improvement, 63.4%/46.4%/9.5%; CDLQI ≥6-point improvement, 60.6%/59.2%/19.7%; Peak Pruritus NRS ≥4-point improvement, 36.6%/26.5%/4.8%; ($P < .001$ for all). LS mean change in affected, BSA (q2w/q4w/placebo) was −30.11/−33.41/−11.66, respectively ($P < .0001$). Dupilumab had an acceptable safety profile in adolescents, similar to adults with AD.

Conclusions: Dupilumab improved AD severity, signs, symptoms, and QoL in adolescents with moderate to severe AD. Safety was generally consistent with previous findings in adults.

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