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Pain intensity assessment scales for dermatologic surgery patients: A rapid review



Bryan T. Carroll, MD, PhD, University Hospitals, Cleveland, Ohio; Panayiota Govas, MD, MScMed, Department of Dermatology, University of Pittsburgh School of Medicine; Norhan Shamloul, Andrea M. Ketchum, MS, MLIS, Drexel University College of Medicine; Beth R. Gordon

Background: The most commonly used rapid pain scales are the numeric rating scale (NRS), visual analog scale (VAS), verbal rating scale (VRS), and faces pain scale (FPS). Conflicting evidence exists regarding their validity, usability and patient/provider preference. ~30% of Mohs micrographic surgery patients report pain intra- and perioperatively. Neglected pain is associated with increased patient dissatisfaction and postoperative complications. No comparative studies of pain scales in Dermatologic surgery exist.

Objective: To identify the superior pain assessment instrument for the setting of short, outpatient visits similar to dermatologic surgery visits.

Methods: The review was registered with PROSPERO (CRD42018091058) and conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. PubMed/Medline, Embase, Cochrane Library, Scopus, and Web of Science were searched in May 2018. Inclusion criteria: English-language literature directly comparing ≥ 2 pain scales for evaluation of acute pain in adolescent-adult (13+) patients. Exclusion criteria: commentaries, narrative reviews, editorials, case reports, single cases, or conference abstracts.

Results: The search yielded 807 studies; 45 met all criteria. VAS and NRS were strongly correlated. Patients preferred VRS most ($n = 7$), followed by NRS ($n = 6$). VRS was useful for cognitively-impaired elderly patients (MMSE < 17). NRS was frequently chosen as easiest, most accurate, and preferred tool for post-operative and acute pain patients. Providers preferred NRS owing to its high sensitivity, comprehension and speed. VAS was difficult for elderly patients to use.

Conclusions: NRS was most sensitive, efficient and preferred by providers, postoperative and acute pain patients, and is most compatible for use in dermatologic surgery.

Commercial disclosure: None identified.

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Passively collected data from smartphones correlate with subjective disease severity in atopic dermatitis



Aleksander Eiken, MD, Charlotte Amalie Pind Laugesen, RN, CsSP, Ari Páll Ísberg, MSc, Andrei Chiriac, MD, Ana-Maria Dutei, MD, Irina Deaconescu, MD, Ionela Manole, MD, Teske Valk, MD, Anders Daniel Andersen, PhD, John R. Zibert, MSc, PhD, LEO Innovation Lab, LEO Pharma, Denmark

Introduction: Atopic dermatitis (AD) often fluctuate in intensity with changes in sleep, activity-levels, stress and weather conditions including pollen. As objective data confirming these factors' association with AD disease activity is limited, we utilized smartphone data in a fully virtual trial to investigate their association over time.

Methods: For 12 weeks, AD patients completed weekly Patient-Oriented-Eczema-Measure (POEM) and twice-weekly stress (1-10 scale) online questionnaires. Patient-obtained smartphone photos (<https://www.getlimage.io>) of target lesions were sent twice weekly for objective severity evaluations performed by three blinded dermatologists using the intensity items from SCORAD. A mobile application (<https://www.theneura.com>) captured smartphone sensor data and calculated busyness level and sleep length, while GPS location was used to extract weather and pollen data from external databases. Data were analyzed with the use of linear mixed-effects models.

Results: 38 out of 44 subjects (age [mean \pm SD] 33.4 ± 9.9 y, iSCORAD 3.6 ± 1.9 , POEM 12 ± 5.9) completed the study. 885/912 (97.0%) of all questionnaires were answered, and 838/912 (91.9%) iSCORAD evaluations were possible. POEM correlated positively with air pressure, stress and birch/elm pollen, and negatively with humidity and busyness levels (all $P < .05$). iSCORAD was positively correlated with stress ($P < .01$).

Conclusions: Smartphone obtained data associated patients' perception of disease severity (POEM) with air pressure, pollen, humidity, and busyness. Smartphone derived data may hold promise in understanding the etiology and trigger factors of chronic skin diseases such as AD, however more studies are needed.

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Risks by age and sex for thyroid dysfunction in patients with hidradenitis suppurativa: Real-world data from a large urban Midwestern US dermatology patient population



Henry Bison, Department of Dermatology, Feinberg School of Medicine, Northwestern University; Rohail Memon, Anna C. Figueiredo, MD, Eran Gwillim, MD, Dennis P. West, PhD, Northwestern University; Beatrice Nardone, MD, PhD, Department of Dermatology, Feinberg School of Medicine, Northwestern University

Objective: To determine if an association exists between thyroid dysfunction and HS within a large, urban Midwestern US dermatology patient population.

Methods: Real world data were extracted from a medical record data repository (>8 million patients) for adult dermatology patients 18-89 years old (Jan 2001 to Jul 2018), follow-up ≥ 12 months, and HS diagnosis (ICD-9/10 705.83, L73.2). The control population consisted of all dermatology patients without HS diagnosis during the same time frame. Outcome of interest was a subsequent diagnosis for hypothyroidism or hyperthyroidism. The analyses were stratified by age and sex; odds ratios (ORs) and 95% confidence intervals (CIs) were obtained.

Results: Of 140,793 dermatology patients, 61,811 18–40-year-olds yielded 405 with HS and 78,892 41–89-year-olds yielded 327 with HS. When stratified by age, a significant increased risk for hypothyroidism was detected for the younger HS population compared with younger no-HS controls (OR 1.51, 95% CI 1.04-2.20; $P = .03$) but not for hyperthyroidism ($P = .25$). While for the older group, no significant association was detected for hypo- or hyperthyroidism with HS. When stratified by sex, a significant increased risk for hypothyroidism existed only for younger-group men (OR 3, 95% CI 1.21-7.45; $P = .03$)

Conclusions: These findings unexpectedly show an increased risk for hypothyroidism in adult male HS patients under 41 years of age, suggesting both an age and sex difference in the emergence of hypothyroidism. Further exploration of hypothyroidism as a comorbidity with HS, with attention to young male patients, is warranted.

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A US population-based epidemiologic study of vulvar melanoma from the Surveillance, Epidemiology, and End Results (SEER) database



Maia K. Erickson, BA, Department of Dermatology, Feinberg School of Medicine, Northwestern University; David Pontes, BS, University of Chicago Pritzker School of Medicine, Rohail Memon, Northwestern University; Bethanee J. Schlosser, MD, PhD, Dennis P. West, PhD, Northwestern University Feinberg School of Medicine; Beatrice Nardone, MD PhD

Background: Although rare, gynecologic tract melanomas are typically aggressive with the vulva as the most common site (70%). Our aim was to assess current epidemiology for VM.

Methods: Data from SEER 18 Registries database (2000-2016) were extracted for all adult (>19 yo) VM patients, using ICD-3 histologic classification. Age-adjusted incidence rate (IR), incidence trends (ITs), annual percent change (APC), and survival were calculated. Analysis was stratified by age: <60 and ≥ 60 y (peak incidence of all melanoma = 60 y).

Results: Of 746 cases, the overall IR was 0.1 with an increased IT of 0.8 per 100,000 (2000-2016). IR for VM was significantly higher in older ($n = 534$) vs younger ($n = 212$) women: IRR 7.77 95% CI 6.61-9.17; $P < .05$. Similarly, an IT was significant for older (APC 2.2) but not for younger (APC -2.6) women. Histologic subtype was unspecified for the majority ($n = 410$). For the remainder ($n = 330$), the superficial spreading subtype rate was significantly higher in younger while nodular melanoma rate was significantly higher in older. Regarding disease extent, 63.0% were localized, 23.7% spread regionally, and 8.7% metastasized. Caucasians predominated (93%) while Asians and African Americans accounted for 4% and 3%, respectively. Survival at 5 years was higher in women <60 y compared with ≥ 60 y (61.9% vs 39.7%).

Conclusions: There was an increased IR for VM between 2000 and 2016. Older women experienced higher rates, more aggressive histologic subtype and lower survival rates of VM. These findings serve to further inform clinician knowledge in the management of VM.

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