16910

Cutaneous toxicities in lung cancer patients on immune checkpoint inhibitor therapy

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Introduction: Immune checkpoint inhibitors (ICPIs) have revolutionized cancer treatment. They were initially FDA approved for metastatic melanoma and are now used to treat a variety of cancers. Cutaneous toxicities are the earliest-appearing and most prevalent toxicity from ICPIs. While there have been numerous descriptions of the cutaneous toxicities from ICPIs in melanoma patients, there are no such studies for patients with non−small cell lung cancer (NSCLC).

Methods: A retrospective chart review was performed with a board-certified dermatologist and a board-certified oncologist to analyze all institutional patients with diagnoses of NSCLC and a dermatologic condition between 1/1/2017 and 12/31/18. The institutional electronic medical record was queried using ICD10 codes for a combination of NSCLC and various dermatologic diagnoses.

Results: Sixty-four patients were reviewed with a median rash time-to-onset of three months and duration of four months. Eczematous, morbilliform, and acneiform rashes were most prevalent. There were 28 patients who had previous dermatologic conditions and only four of them had related cutaneous toxicities. Most patients' (70%) rashes improved or resolved after treatment with oral antihistamines and topical steroids. Eight (13%) of them had a dose impact to their ICPI due to their rash, with four (6%) patients discontinuing their ICPIs.

Conclusions: Five patients had to discontinue their cancer treatment due to adverse events, four of which were rashes. With the high incidence of cutaneous toxicities seen in the clinical trials (18%) and the potential for dose impact among these patients, cutaneous toxicities from ICPIs in NSCLC patients is important to describe.

Commercial disclosure: None identified.

16918

Use of dietary supplements among patients with alopecia

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The dietary supplement industry has capitalized on the vulnerability of patients experiencing hair loss, with dozens of products marketed as hair stimulants despite conflicting evidence on efficacy. We sought to examine dietary supplement intake and associated factors among patients presenting to a specialty alopecia clinic. A retrospective review of patient intake forms, including current treatments for hair loss and use of herbs, vitamins, and supplements, was performed. A total of 930 adult patients were included, 81% identified as female and 71% as Caucasian. The average number of supplements was 2.5 with vitamin D (29%) being the most common, followed by multivitamins (28%) and biotin (21%). Compared with the national average, we noted increased use across all age groups (73% vs 54% ages 40-64, 78% vs 74% in age 65 and older), most notably among younger people (ages 18-39) with 63% compared with 40%. Interestingly, supplements marketed specifically for hair loss, such as Hair/Skin/Nails, Nutrafol, Viviscal, and biotin, had similar rates of use among all age groups at 35%-37%. This subset of patients also had a higher number of total supplements used (4.5) compared with the overall study population (2.5). Often considered harmless, supplementation is not without risk. Biotin is an especially ubiquitous hair loss supplement; however, it has been shown to interfere with common diagnostic immunoassays including TSH, PSA, and troponins. Further complicated by lack of FDA supplement regulation, it is critical for clinicians to discuss risk and benefits of use, particularly in hair loss patients.

Commercial disclosure: None identified.

16921

Comparison of low-fluence picosecond 1064-nm Nd:YAG laser and picosecond 532-nm Nd:YAG laser in the treatment of pigmentary disorders in Asians: A retrospective analysis

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Background: Low-fluence picosecond (LFPS) 1064 nm neodymium: yttrium-aluminum-garnet (Nd:YAG), also known as laser toning, is attracting attention in treatment of pigmented disorders in Asian skin phenotype.

Objective: To compare the efficacy and safety of LFPS 1064 nm Nd:YAG laser with picosecond 532 nm Nd:YAG laser for the treatment of pigmented lesions in Taiwanese.

Methods: We conducted a retrospective photographic and chart evaluation of thirty-one subjects of Fitzpatrick skin types III-VI who received LFPS 1064 nm Nd:YAG or picosecond 532 nm Nd:YAG treatments in a single tertiary center. Comparative photographs were taken with VISIA complexion analysis. Treatment efficacy was assessed by two blinded dermatologists, using a visual analog scale (VAS) for percentage of pigmentary clearance in standard photographs.

Results: The most common pigmentary disorder treated was solar lentigines (84.4%), followed by postinfiammatory hyperpigmentation (6.3%), nevus zygomaticus (6.3%) and melasma (3.1%). The mean fluence and spot size applied were 0.35 J/cm^2 (0.3-0.4 J/cm^2) and 3.3 mm (2.3-4.3 mm) in picosecond 532 nm group and 0.82 J/cm^2 (0.7-1.0 J/cm^2) and 8.2 mm (7-10 mm) in the LFPS 1064 nm group, respectively. Clinical efficacy of the picosecond 532-m and LFPS 1064 nm laser treatments were comparable for lesions treated on the face with a mean VAS of 2.03 $\pm$ 1.16 and 1.67 $\pm$ 0.72. There is no between-group significant difference in VISIA pigment score. There were two cases of postinflammatory hyperpigmentation in the picosecond 532 nm group which resolved within one month.

Commercial disclosure: None identified.

16937

Evaluation of construct validity and inter-rater reliability of the Objective Structured Assessment of Technical Skills (OSATS) tool for assessment of surgical skills of dermatology trainees

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Background: Assessment of procedural skills is an integral component of residency training. The OSATS tool, comprised of the global rating scale (GRS) and a suture-task checklist (STC), has been validated to evaluate surgical performance among surgical trainees. We assessed construct validity and inter-rater reliability of the OSATS tool in evaluating video recordings of dermatology residents throughout different stages of training.

Methods: We conducted a multi-institutional, prospective, rater-blinded study of attending physician assessment of resident surgical skills based on the OSATS tool. After obtaining informed consent, we recorded dermatology residents performing benign elliptical excisions. Videos were deidentified, and five dermatologic surgeons evaluated the surgical performance based on the OSATS rubrics.

Results: Videos of twenty dermatology residents from three different academic institutions of varying post-graduate years were evaluated. There was a significant association between residency year and the GRS ($P = .01$) and STC ($P = .02$) scores. Months of dedicated dermatologic surgery rotations were significantly associated with GRS ($P = .002$) but not STC ($P = .17$) scores. Higher GRS scores were associated with higher STC scores ($P = .0004$). GRS had a higher intraclass correlation coefficient (ICC) compared with the STC scale (0.84 and 0.62, respectively).

Conclusions: OSATS scores correlated with the surgical experience of residents, as measured by years within the residency program and months on dedicated dermatologic surgery rotations. The OSATS tool exhibited a high level of agreement among the five raters across multiple institutions. Our data demonstrates that the OSATS tool is a valid and reliable approach for assessing surgical skill among dermatology trainees.

Commercial disclosure: None identified.