

13339

**Patch testing to botanicals: The Mayo Clinic experience**

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The botanicals market in personal care products continues to grow, leading to increasing patient requests for patch testing to them. It can be challenging when patients request testing to their own essential oil botanicals in part due to lack of regulation in the industry and potential safety concerns. There have been multiple reports of contact dermatitis, phototoxic reactions and even systemic hypersensitivity from botanical products. Data are sparse on the actual incidence and prevalence of contact dermatitis caused by botanicals. We sought out to report the Mayo Clinic experience of patch testing to 32 botanical products. Patch test reactions were classified on the following reaction scale: negative, papular erythema (weak), erythema with edema or vesicles (strong), bullous lesions (extreme), and irritant. As with our previous studies, patch test reactions were deemed positive if on the day five reading there was a weak, strong, or extreme reaction. Patch tests graded as macular erythema were excluded from the analysis. From 1997 to 2017, 12,169 people were patch tested to botanicals of which 4032 were men and 8137 women. Of those, 446 (11.1%) men and 874 (10.7%) women had at least one positive patch test. The mean age of the population tested was 54 (SD 17.7) years. Most patients presented with generalized (334), hand (284), or face dermatitis (232). This study provides insight into reaction rates to botanicals. These results highlight the importance of educating patients that naturally derived products are potential common causes of allergic contact dermatitis.

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13393

**Patient perspectives for impact of psoriasis on quality of life: A qualitative study**

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The link between psoriasis and depression has long been known. Recently, more light has been shed on patient quality of life. Therefore, we sought to further characterize this through a qualitative study focused on patient perspectives. An online survey was posted to psoriasis-relevant groups on Facebook in the summer of 2018. A total of 631 adults with psoriasis responded. Overall, 65.8% reported that their psoriasis keeps them from engaging in social activities. Unsurprisingly, those who had psoriasis primarily on their body (63.8%) were significantly more affected than those on their scalp (35.9%) ( $P = .002$ ). Of all open-ended responses describing which activities they were limited from, 56.3% were related to swimming, the beach, and the pool. Some selected examples of responses include: "Anything where judgmental people make our life hard," "Hairstyling from friends for being a bridesmaid," "Hold the newborn baby," "In school; I rather choose to stay at home just to avoid people with disgusting expression in their faces," "Shopping, going out; people are very cruel when you have skin conditions," and "Sometimes I feel like a leper, and don't participate in social events." The vast majority of reasons for why activities are avoided is related to embarrassment, self-esteem, self-confidence, and avoidance of people staring and treating them as if they were contagious. Of all respondents, 51.7% feel like they have faced discrimination either in the workplace, school, or socially because of their visible skin lesions. Our findings are consistent with other publications regarding the embarrassment and stigmatization that patients face.

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13350

**Psoriasis outcomes in a randomized trial of etanercept and methotrexate as monotherapy or in combination in patients with psoriatic arthritis**

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**Background:** In a phase 3 trial in psoriatic arthritis (PsA), etanercept (ETN) monotherapy (mono) and ETN+methotrexate (MTX) were significantly more effective than MTX-mono in achieving an ACR 20 response (Mease et al, 2019). Here we report on psoriasis outcomes.

**Methods:** PsA patients were randomized to weekly: MTX 20 mg ( $n = 284$ ); ETN 50 mg ( $n = 284$ ); or ETN 50 mg+MTX 20 mg ( $n = 283$ ). Measures included affected body surface area (BSA) and static Physician Global Assessment (sPGA) in patients with baseline, BSA  $\geq 3\%$  or  $\geq 10\%$ . Nominal  $P$  values compared MTX-mono vs ETN-mono or ETN+MTX.

**Results:** At week 24 in patients with baseline, BSA  $\geq 3\%$  ( $n = 548$ ; mean baseline, BSA = 17%), BSA  $\leq 3\%$  was achieved by 61.5%, 68.7% ( $P = .32$ ), and 74.2% ( $P = .01$ ); BSA  $\leq 1\%$  by 44.7%, 49.4% ( $P = .58$ ), and 57.1% ( $P = .022$ ); sPGA  $\times$  BSA  $\leq 3$  by 57.3%, 63.3% ( $P = .43$ ), and 71.4% ( $P = .007$ ); and sPGA  $\times$  BSA  $\leq 1$  by 42.7%, 45.8% ( $P = .83$ ), and 58.4% ( $P = .004$ ) of patients in the MTX-mono, ETN-mono, and ETN+MTX arms, respectively. At week 24 in patients with baseline, BSA  $\geq 10\%$  ( $n = 286$ ; mean baseline, BSA = 28%), BSA  $\leq 3\%$  was achieved by 42.4%, 58.2% ( $P = .076$ ), and 64.0% ( $P = .003$ ); BSA  $\leq 1\%$  by 31.5%, 44.0% ( $P = .2$ ), and 47.7% ( $P = .027$ ); sPGA  $\times$  BSA  $\leq 3$  by 39.6%, 56.0% ( $P = .059$ ), and 64.7% ( $P < .001$ ); and sPGA  $\times$  BSA  $\leq 1$  by 29.7%, 44.0% ( $P = .12$ ), and 49.4% ( $P = .008$ ) of patients in the MTX-mono, ETN-mono, and ETN+MTX arms, respectively. Incidence of nausea through week 48 in the overall population was 13.1% (MTX-mono), 6.4% (ETN-mono), and 14.4% (ETN+MTX).

**Conclusions:** ETN-mono and ETN+MTX had numerically greater psoriasis outcome results than MTX-mono; adding MTX numerically improved ETN efficacy on skin end points.

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13394

**Unconscious biases and health disparities in dermatology: A pilot study of practitioners**

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There are substantial barriers to obtaining quality care for racial and ethnic minorities as well as those with low income. Although this has been increasingly documented, no explicit bias has been found. Recent attempts have been made to study implicit, or unconscious, biases, which may incidentally predispose us to incorrect assumptions. A pilot study was conducted to examine the effects of patient skin tone and sex on provider decision-making. An online survey was sent to members of the Association of Professors of Dermatology to distribute to attendings and residents in 2017-2018. Case scenarios differed in patient skin tone as depicted in photographs and sex. There was a total of 80 respondents. Overall, 81.3% were white, 12.5% Asian, 3.8% black or African American, and 1.3% Hispanic or Latino. For a 52-year old with scalp psoriasis, significantly more labs were ordered when the patient had light skin tone compared with medium ( $P = .033$ ) or dark ( $P = .013$ ). For a 15-year-old with atopic dermatitis, HIV and RPR testing were only ordered for medium and dark skin tones and never for light. For a 58-year old with squamous cell carcinoma, women were significantly more often recommended Mohs micrographic surgery compared with excision ( $P = .004$ ). There was no difference between these recommended interventions when male. Dermatologists may be uniquely at risk for unconscious biases when treating patients, especially since most diagnoses require visualization of patient skin. Although limited in this pilot study, our results suggest that an unconscious bias may be present in the field.

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