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High subject satisfaction after esthetic treatment of glabellar lines with abobotulinumtoxina in up to three injection cycles

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Introduction: To present subject satisfaction data collected after esthetic treatment of glabellar lines (GLs) with abobotulinumtoxinA (ABO) in two published prospective non-interventional multicenter studies.

Methods: Subjects aged ≥ 18 years with moderate to severe glabellar lines were included in two prospective non-interventional studies conducted at 79 centers in 10 countries. In both studies, ABO was administered in accordance with routine clinical practice. Follow-up extended to 4 months after one injection cycle in one of the studies, and to 3 weeks after the last of three injection cycles (done 3-6 months apart) in the other study. Subject satisfaction questionnaire and self-perception data from both published studies are presented here.

Results: 709 subjects were enrolled; ≥90% were women. In the study with one injection cycle, the mean baseline dose was 54.7 U (women) and 65.0 U (men). In the study with three injection cycles, the mean dose was 45.5-46.0 U/cycle. Subject satisfaction was high in both studies. At 3 weeks after the initial injection cycle, ≥95% of subjects were satisfied with the esthetic outcome; ≥98% reported natural-looking results. The level of subject satisfaction was consistent across injection cycles.

Conclusions: Esthetic treatment of moderate to severe glabellar lines with ABO in accordance with routine clinical practice resulted in high subject satisfaction after the initial injection cycle in both studies. The level of subject satisfaction was consistent across injection cycles (done 3-6 months apart).

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Does perceived social support influence sun protection behaviors among medical students? Testing an extension of the Health Belief Model

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Introduction: Previous research demonstrated that medical students fail to adequately engage in sun protection behaviors (SPBs). Using the Health Belief Model (HBM) as a theoretical framework, the present study aimed to identify factors explaining SPBs among medical students. In addition, this study investigated whether adding perceived social support to HBM would increase explained variance (R^2) in SPBs.

Methods: This cross-sectional study included a convenience sample of 186 medical students enrolled at a university in the southeastern region of the United States. A 45-item valid and reliable survey assessing socio-demographics, HBM constructs, and perceived social support was administered electronically.

Results: The mean age of the participants was 26.84 (±4.56) years. Of the 186 students, 52.7% were females and 75.3% were Caucasian. Overall, level of engagement in SPBs was low. Regarding perceived barriers to SPBs, participants reported that "suntan is attractive," "forget to use," and "too hot to wear." Results showed that female gender, high propensity to burn rather than tan, and family history of skin cancer were associated with SPBs. Of the HBM constructs, perceived susceptibility (standardized coefficient = 0.118, $P = .038$), perceived benefits outweighing perceived barriers (standardized coefficient = 0.212, $P < .001$), and self-efficacy (standardized coefficient = 0.559, $P < .001$) were significant predictors of SPBs. Further, the addition of perceived social support to the HBM did not significantly increase R2, neither was perceived social support a significant predictor of SPBs (standardized coefficient = 0.015, $P = .791$).

Conclusions: Based on this study's findings, intervention programs aimed at increasing SPBs should consider modifying HBM constructs rather than modifying perceived social support for SPBs.

Commercial disclosure: None identified.

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Epithelialized tracts are active mediators of inflammation in hidradenitis suppurativa

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Introduction: Hidradenitis suppurativa (HS) is a chronic, inflammatory disease characterized by painful nodules, abscesses and draining sinuses, most commonly occurring in the inguinal, axillary, and submammary areas. Severe disease is associated with discharging sinus tracts and fibrotic scarring. The development of dermal tunnels and interconnecting tracts is poorly understood, and has traditionally been considered an end-stage feature of disease. Methods/Results: After receiving approval from the Rockefeller University's Institutional Review Board, unaffected, perilesional and lesional HS skin was collected by punch biopsies. Immunohistochemistry demonstrated a strong S100A7, fillagrin, loricrin and keratin 16 staining, as well as the presence of melanocytes and Langerhans cells within HS dermal tracts. Comparable levels of CD3, CD163 and Neutrophil Elastase were found surrounding the dermal tracts as within the superficial dermis, with the tracts containing a higher number of Neutrophil Extracellular Traps. RT-PCR demonstrated an elevation of IL-17A, IL-17C, IL-17F, IL-22, IL-26, IL-36α, IL-36γ, CCL20, and INFγ in HS, with lesional skin having similar levels of the pro-inflammatory cytokines as psoriasis. Unaffected HS skin had higher levels of pro-inflammatory cytokines compared with skin from healthy volunteers.

Conclusions: The results of our study demonstrate that the epithelialized tracts in HS mimic the morphology, function and the pro-inflammatory milieu of the overlying epidermis. The data establishes parallels between psoriatic epidermis and epithelialized tracts in HS, suggesting psoriasis-like feed-forward mechanisms may be involved in dermal tract inflammation. Our data suggests that the epithelialized tracts are active mediators of inflammation, rather than a fibrotic end-stage feature of HS.

Commercial disclosure: None identified.

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Keratoacanthomas associated with anti−TGF-β immunotherapy

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Keratoacanthomas (KAs) are rapid-growing skin tumors that resemble well differentiated cutaneous squamous cell carcinomas (SCCs) and typically present as solitary lesions on sun-exposed skin. KAs can arise in association with medications, including inhibitors of BRAF or transforming growth factor beta (TGF-β). A novel bifunctional fusion protein that blocks both programmed death ligand 1 (PD-L1) and TGF-β signaling has shown a manageable safety profile and clinical efficacy in patients with heavily pretreated solid tumors. In these patients, we have observed adverse events (AEs) that include both immune-related AEs and biopsy-proven KAs. In total, 18 of 93 treated patients (19%) developed at least 1 KA. These lesions appeared on chronically sun-damaged skin, typically months after starting therapy. KA-like papules were managed by observation with destructive therapy (cryotherapy or excision) used for symptomatic or clinically atypical lesions. Patients generally did not require treatment discontinuation. Whereas most patients had small numbers of treatment-emergent KAs, 3 patients developed numerous eruptive KAs. These patients' presentations resembled Grzybowski-type eruptive KAs in that they also demonstrated generalized pruritus, macular erythema, and/or lesions in areas of prior instrumentation suggestive of an isomorphic response. Acitretin was helpful in controlling the eruptive KAs and associated AEs. The occurrence of isolated and eruptive KAs in this patient population adds to a growing body of evidence supporting an association between KA development and reduced TGF-β signaling. Ongoing studies are investigating the predisposing genetic and molecular factors required for TGF-β inhibitor−related KAs and exploring strategies to prevent these cutaneous neoplasms.

Commercial disclosure: None identified.