Scratching severity for assessment of itch

Although itch is a common symptom of numerous dermatological and medical conditions and is often associated with decreased quality of life, no simple and objective assessments for itch have been validated for clinical studies. In a prospective study of patients with atopic dermatitis, Udkoff and colleagues determined that severity of scratching was correlated with patient-reported severity of itch and atopic dermatitis quality-of-life measures. The scratching severity improved over time in association with improvements in itch, pain, sleep, and quality of life. These results indicate that assessment of scratching severity is a simple, intuitive, and objective measure for itch and may be generalizable, upon further validation, to other pruritic disorders. See page 1062.

Mutation in Sporadic and Syndromic BCCs

Basal cell carcinomas (BCCs) harbor mutations that upregulate the sonic hedgehog pathway and are often treated by targeting this pathway with SMO inhibitors (Smols), such as vismodegib and sonidegib. Although most BCCs are sporadic, some patients develop basal cell nevus syndrome (BCNS) due to germline mutations in pathway genes. Although the lesions are indistinguishable by histology, BCNS lesions are more responsive to Smols. By comparing these two types of lesions, Chang and colleagues discovered that syndromic BCCs have lower mutational load, increased genomic stability, decreased contribution of UV mutagenesis, and fewer Smol-resistant mutations at baseline than sporadic BCCs, providing a potential explanation for the relatively indolent clinical course and good clinical response to Smols of BCNS-BCCs. See page 1044.

Bone Marrow Cell Transplantation Fails to Generate Keratinocytes

Previous reports described bone marrow (BM)-derived keratinocytes in BM chimeric mice with ubiquitous promoter-driven reporters and suggested that transplantation of BM-derived stem cells may improve the blistering disease epidermolysis bullosa via transdifferentiation. In this issue, however, Hünefeld and colleagues reported that BM-derived stem cells preserve their mesodermal fate in desmoglein-3-knockout mice after transplantation. Egawa and Kabashima also reported that, in both the steady state and after wounding, BM-derived cells were unable to differentiate into keratinocytes in keratin 5-specific reporter mice but rather migrated as immune cells to sites of wounding. Both studies, therefore, refute the ability of BM-derived stem cells to become keratinocytes. Thus, improvements in transplanted patients likely do not result from corrected gene expression in keratinocytes. See pages 1157 and 1228.

Population-Based Evaluation of Antibiotic-Associated Risk of SJS/TEN

Stevens-Johnson syndrome and toxic epidermal necrolysis (SJS/TEN) are life-threatening mucocutaneous adverse drug reactions that are commonly attributed to sulphonamide antibiotics as well as other medications. Using a UK-based database, Frey and colleagues conducted a population-based case-control study with 480 cases of validated SJS/TEN. This study revealed that a previously reported association between cotrimoxazole, a combination of the sulphonamide antibiotic sulfamethoxazole and the non-sulphonamide antibiotic trimethoprim, with SJS/TEN was at least in part attributable to trimethoprim, which is commonly prescribed alone in the UK. Additionally, this study confirmed previously suggested associations between SJS/TEN and penicillins, quinolones, cephalosporins, and macrolides. See page 1207.

Discovery of Statin for HS Treatment

As more than 40% of patients with the chronic inflammatory disease hidradenitis suppurativa (HS) do not achieve a clinical response to treatment with the tumor necrosis factor-inhibitor adalimumab, Kuo and colleagues utilized computational drug repositioning methods to identify potential adjuvant therapeutics for this group of patients. Following identification of lipid-modifying agents that opposed altered gene expression in HS, these investigators examined the effects of atorvastatin in six patients with moderate to severe HS, finding that this statin drug may be a safe potential adjunctive therapy for HS patients. This result is particularly intriguing due to the high co-morbidity of metabolic syndrome in HS patients and warrants future placebo-controlled trials. See page 1209.


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