34612 Exploring the natural history of vitiligo in the United States: Findings from the VALIANT study

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Exosome therapy for scalp hair growth—A review of the in vivo and in vitro evidence
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Background: Exosome therapy is an evolving field that is being investigated for use in treating hair loss. As no human clinical studies exist, we sought to review the in vivo and in vitro available preclinical studies.

Methods: A literature search including the terms, “exosomes and hair,” “exosomes and alopecia,” and “exosomes and hair loss,” was conducted in July 2021 using the PubMed database. Three reviewers assessed the articles for relevance.

Results: 83 articles resulted. 75 articles were eliminated as they focused on ear rather than scalp hair, were repeated or reviewed articles, and/or studied extracellular vesicles instead of exosomes specifically. The remaining 10 articles were reviewed. All 10 were preclinical studies, and 9 of them suggested positive effects on hair growth (2 discussed a prolonged anagen phase, 5 discussed increased hair growth, 5 discussed hair related growth factor alterations). Two of the articles discussed in vivo studies only. 3 of the articles focused on in vitro studies, and 5 included both in vivo and in vitro studies. All of the in vivo studies were mouse or rat studies, while the in vitro studies included mouse, goat, or human cells. Only 1 hair loss disease in a C3H/HeJ mouse model was assessed (alopecia areata), which showed improvement with exosome use.

Conclusions: The preclinical research including both in vivo and in vitro studies suggests that exosome therapy could induce hair growth. However, human clinical studies are needed to verify claims of hair growth prior to exosome therapy initiation in humans.

Commercial Disclosure: None identified.

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Vitiligo is a chronic autoimmune disease characterized by the destruction of melanocytes, resulting in depigmented skin lesions. Epidemiology studies in vitiligo are often limited to smaller sample sizes and rely on dermatology clinics as the source population. The population-based Vitiligo and Life Impact Among Patients (VALIANT) study sought to understand the natural history of vitiligo among patients around the world. Here, data from US participants are presented. Participants were recruited via an online panel. Adults (aged ≥18 years) who self-reported a vitiligo diagnosis by a health care professional were eligible to participate. Of 608 US participants, 58% were male; median (range) age at the time of the survey was 56 (18–85) years. Mean disease duration was 11 years, with a mean 1.6 years between first noticing lesions and achieving a formal diagnosis. More than one-third of patients were previously misdiagnosed (37%), with higher rates among patients with darker skin types (67% for Fitzpatrick types IV–VI). Nearly two-thirds (62%) directly sought treatment for vitiligo; vitiligo was an incidental finding in the remaining 38%. Nearly two-thirds (64%) were diagnosed by a dermatologist, or a nurse practitioner or physician assistant in a dermatology-focused practice, most patients (71%) noted a family history of vitiligo (comparable paternal vs maternal). Median body surface area affected by vitiligo was 4.25%, as measured by the self-assessed Vitiligo Extent Scale. In summary, these findings provide a new perspective on the diagnosis journey for patients with vitiligo and highlight the need for accurate, more timely diagnosis.

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Factors associated with eczema clinical trial participation in adults
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There is a paucity of dermatology literature describing motivators and barriers to patient participation in clinical trials (CTs). This study aimed to identify the degree of patient awareness and understanding of CTs, and motivators/barriers to CT participation (CTP) in adults with eczema. The online survey was administered to a National Eczema Association audience of adults ≥18 years of age with one or more self-reported forms of eczema. Analysis included univariable and multivariable logistic regression. Of the 1016 participants (mean age 49.4, SD 18.5), 78.2% were female (n = 741). The most common race was White (74.4%, n = 694). Those over 65 years old were less likely (aOR 0.5, 95% CI 0.3–0.7) to have considered CTP compared with those age 18–64 (P < 0.001). Those at university hospital, university hospital, understanding were less likely to have CTP than those at university hospital. Understanding were less likely to have CTP versus those with above average understanding. Among participants with some degree of prior CT exposure (participation, attempt or interest), those who were Extremely/Very Confident in their ability to find eczema CT information were more likely (aOR 3.0, 95% CI 1.4–6.8) to have prior CTP compared with those who were Slightly/Not Very Confident. Race, ethnicity, and rural/urban status were not associated with CTP. This is the first study in dermatology to identify barriers to CTP, including age ≥65 years and lack of prior CTP, which may contribute to decreased CT awareness and understanding. These data may help identify strategies to improve CTP among a broader demographic and improve trial efficiency, equity, and generalizability.

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