Novel psoriasis therapeutics: examining the anti-inflammatory utility of anti-anxiolytic medications

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Abstract

Statement of the Problem: Psoriasis is a debilitating autoimmune disease defined by erythematous, pruritic, and scaly plaques. Yet, this disease also has numerous extracutaneous associations including depression, heart disease, arthritis, and inflammatory bowel disease. The combination of physical and mental manifestations of psoriasis can be explained, respectively, by inflammatory cytokines that act on skin cells to create scaly patches and brain cells to alter one's mental state. The purpose of this study is to discusses the novel use of anti-anxiolytic medications to address psoriasis therapeutics. Methodology & Theoretical Orientation: To obtain these results, various search terms such as psoriasis and anti-anxiolytics were utilized. Furthermore, the articles were selected based on recency of publication as well as depth of detail regarding the specific immunologic mechanisms by which anti-psychotics exert their therapeutic effects. Findings: The results show that educing anxiety can reduce the release of stress compounds, thus reducing body's inflammatory reaction. Specifically, stress signals such as CRH and substance P contribute to the release of inflammatory cytokines such as TNF-α and interleukins. Conclusion & Significance: Psoriasis provides evidence for the connection between the psychiatric symptoms caused by changes in the brain and cutaneous symptoms caused by changes in the skin. The bidirectionality of these interactions is used to create a novel use for anti-anxiolytic medications in treating psoriatic symptoms.

Recent Publications

1. Corliss J. The "heartbreak of psoriasis" may affect your joints, heart, and mind. Cambridge: Harvard Health Blog [Internet]. 2014.
2. Feldman SR. Treatment of psoriasis in adults. UpToDate [Internet]. 2018.
3. Ross-Flanigan N. Chemical cousin of anti-anxiety drugs holds promise for psoriasis treatment. Ann Arbor: University of Michigan Regents [Internet]. 2018.
4. National Psoriasis Foundation. The link between psoriatic disease and mental illness. USA: National Psoriasis Foundation [Internet]. 2015.
5. Hodes GE, Kana V, Menard C, et al. Neuroimmune mechanisms of depression. Nat Neurosci 2015;18(10):1386-93. National Institute for Health and Care Excellence. Ustekinumab for the treatment of adults with moderate to severe psoriasis [Internet]. 2017
6. Blauvelt A, Prinz JC, Gottlieb AB, et al. Secukinumab administration by pre-filled syringe: efficacy, safety and usability results from a randomized controlled trial in psoriasis. Br J Dermatol 2015;172(2):484-93.



Biography

Sheida Naderi-Azad has an expertise in immunodermatology, with a deep interest in melanoma immunotherapeutics, primary immunodeficiency diseases such as atopic dermatitis, and autoimmune conditions such as psoriasis. She has developed this interest upon completing her Bachelor of Science in Microbial and Environmental Pathophysiology at the University of British Columbia, and further completing a summer studentship at the Melanoma Clinic, Massachusetts General Hospital. She has had numerous published articles and presentations on melanoma therapeutics, anti-inflammatory conditions and dermatologic comorbidities such as mood disorders.

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