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| **Name:** |
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| **Group:** |
| 2B-1 |
| **Basic Science Question:** |
| What is an autoimmune disease? |
| **Report:** |
| An autoimmune disease is understood as a host response that recognizes self-peptides to then induces unnecessary destruction of normal tissue. Normally, our adaptive immune cells (mainly B and T cells) undergo selective pressures to ensure that they are capable of not only recognizing foreign antigens (positive selection), but also recognizing and permissing normal self-antigens (negative selection). A body of a person with an autoimmune disease is unable to negatively select immune cells, thus the body thinks that it is under constant attack. We can see that the immune response is misdirected as it tries to clear normal tissue. T cells work by performing a variety of cytotoxic functions to eliminate the pathogen while B cells will differentiate into plasma cells to produce autoantibodies.  Oral Lichen Planus is an autoimmune disease charachterized by constant inflammation of the oral mucosa. Specifically, it can be seen in the buccal regions and on the tongue. The severity of the disease can differ quite substantially. Mild cases will appear with slightly red, swollen areas whereas more severe conditions will prove with white, flaky patches and even open ulcerations. Due to the development of immune cells in response to the disease, actual autoantibodies can be found in patient serum. Typically, OLP is detected more in middle-aged and elderly women. Flare-ups may develop in response to stress, allergy, any mouth injuries, or certain medication use. Treatment with corticosteroids is generally used to reduce swelling and promote healing of the tissue. Corticosteroids can be given topically, via spray, or by injection. Uncontrolled OLP can progress into oral cancers. |
| **References:** |
| Wang, L, Wang, F‐S, Gershwin, ME (Research Center for Biological Therapy, the Institute of Translational Hepatology, Beijing 302 Hospital, Beijing, China; and Division of Rheumatology, Allergy and Clinical Immunology, University of California at Davis School of Medicine, Davis, CA, USA). Human autoimmune diseases: a comprehensive update. (Review).*J Intern Med* 2015; 278: 369– 395.  Chiang, C., Chang, J. Y., Wang, Y., Wu, Y., Lu, S., & Sun, A. (2018). Oral lichen planus – Differential diagnoses, serum autoantibodies, hematinic deficiencies, and management. *Journal of the Formosan Medical Association,* *117*(9), 756-765. doi:10.1016/j.jfma.2018.01.021 |