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Immunome Research

Commentary

Immunological Tolerance

Aniekan Jumbo*

Department of Community Medicine, University of Calabar, Calabar, Nigeria

Commentary

Immunological tolerance is classified into central tolerance or peripheral tolerance depending on where the state is originally induced in the thymus and bone marrow (central) or in other tissues and lymph nodes (peripheral).The mechanisms by which these forms of tolerance are established are distinct, but the resulting effect is similar. The recognition of antigens by the immature B cells in the bone marrow is critical to the development of immunological tolerance to self. This process produces a population of B cells that do not recognize self-antigens but may recognize antigens derived from pathogens or non self. T cells are selected for survival much more rigorously than B cells. They undergo both positive and negative selection to produce T cells that recognize self-MHC molecules but do not recognize self-peptides. Since, central tolerance is not 100% efficient, mechanisms of peripheral T-cell tolerance are required to prevent autoimmunity. Active peripheral tolerance is maintained by numerous types of regulatory T cells, the best known of which are FoxP3+ Tregs that develop naturally in the thymus or can be induced in the periphery.

Enterprise Resource Planning (ERP) covers the techniques and notion employed for the integrated management of businesses as a whole, from the viewpoint of the efficacious use of management resources, to improve the efficiency of an enterprise. Ideally the data for various business functions are integrated. The progression in science gives novel and deeper understandings of human beings organisms. The Human Genome Project uncovered about 20,500 human genes. More recently, non-coding RNAs saw the light and gained researchers interest. Among the different subsets of these non-coding RNAs, microRNAs were identified as 18-25 nucleotides long and have been shown to play critical regulatory roles in a wide range of cellular processes. Emerging studies highlighted the importance of miRNAs in health and in disease. Ten years ago, the role of miRNAs in cutaneous system has been established from skin formation in early life to skin homeostasis maintenance. In addition, a deregulated miRNAs profile was shown to cause major skin disorders. Herein, in this review, a global discussion and findings of the different aspects of miRNAs biology will be covered with a focus on the role of miRNAs in skin biology. There is no gold standard method for detecting latent tuberculosis infection (LTBI) in end stage renal disease (ESRD), the use of tuberculin skin test(TST) remains controversial due to its high rate of false results, new interferon gamma release assays have been developed for diagnosing LTBI as the QuantiFERON-TB Gold test(QFT-G).

The aim of this work was to evaluate the value of Quantiferon-TB Gold test and compare its performance with tuberculin skin test in the diagnosis of latent tuberculosis infection among ESRD patients receiving hemodialysis (HD).

Patients and Methods: 60 ESRD patients undergoing HD and 40 healthy controls were subjected to TST and QFT-G to diagnose Latent TB infection. Merkel cell carcinoma (MCC) is a lethal, aggressive uncommon neuroendocrine skin tumour that mainly occurs in the elderly, and there is no effective treatment. The presence of the Merkel-cell polyomavirus does not influence the activation of phosphoinositide 3-kinase (PI3K) in Merkel-cell carcinoma. Both Merkel-cell polyomavirusâ € “ negative tumor tissues and tumor cells showed high expression of PI3KÎ´. A primary Merkel-cell carcinoma cell line derived from tumors in the patient's lymph nodes. The PI3K signal transduction pathway is commonly activated in human cancers and regulates many of the hallmarks of cancer. Idelalisib, a selective inhibitor of the delta isoform of PI3K (PI3KÎ´), provides impressive therapeutic efficacy to treat patients with certain B-cell hematologic cancers.

Correspondence to: Aniekan Jumbo, Department of Community Medicine, University of Calabar, Calabar, Nigeria, E-mail: Aniekan@gmail.com

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