Short Communication

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B cell populations in the myasthenia thymus that bind rituximab (anti-CD20)

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Abstract

Myasthenia gravis (MG) is associated with antibodies to the acetylcholine receptor (AChR). In early-onset myasthenia gravis (EOMG), the thymus contains multiple lymphocytic infiltrates with AChR-specific germinal centres. When placed in culture, thymic lymphocytes spontaneously produce AChR antibodies. These previous findings provide an opportunity to look in detail at the B cell targets and functions of therapeutic antibodies in a human autoimmune disease. The objective is to study rituximab, a chimeric immunoglobulin (Ig) G1 κ monoclonal antibody that binds a discontinuous conformational epitope on CD20, which is used for treatment of autoantibody-mediated diseases. Immunohistology and radioimmuno assay (RIA) were used to examine binding of biotin-conjugated rituximab to lymphocyte suspensions and to frozen sections of EOMG thymus, comparing antibodies to CD19, CD20 and CD138. Synagis, a humanized respiratory syncytial virus monoclonal antibody, used as negative control.

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Biography

Zarina Zainudeen has completed MSc in Integrated Immunology and she is now in her final year of DPhil in Clinical Neurosciences from University of Oxford, UK. She is a lecturer and a clinical scientist at Advanced Medical and Dental Institute, University Science Malaysia (USM). Her main research focuses are primary immunodeficiency (PID), auto-immune diseases and immunotherapy.