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Clinical Allergy Tips

Edited by Stuart A. Friedman, MD

From the Editor: Cost effective diagnostic endeavors are a significantp benefit for the patient. Their out-of-pocket share of the payments for their evaluation will be less, and "word" does spread when a physician's diagnostic skills are highly efficient besides being accurate. Dr. Mandel Sher lends us a few of his clinical pearls regarding various immune system evaluations. In addition to Dr. Sher's approach, I also employ a screening questionnaire for SLE that was published by Liang et al in Arthritis Rheum *1980 Feb 23(2): 153-7 that increases the efficiency of diagnosis.*

The tests that <u>really</u> count…..

By Mandel R. Sher
12 May 2010

The goal of diagnostic testing is to use the least number of tests with high sensitivity and specificity to make an accurate diagnosis. Here are some examples when a few laboratory tests have high diagnostic yield.

In angioedema without urticaria, the differential diagnosis includes hereditary angiodema (HAE) from protein or functional deficiency of C1 esterase inhibitor. While an active attack is associated with decreased complement components C2 and C4, the C4 is also decreased in between attacks. A normal C4 tends to make a HAE diagnosis less likely with a lower yield for subsequent C1 esterase inhibitor levels.

In younger patients with systemic lupus erythematous, disease activity is generally associated with depressed complement levels and elevated anti-double stranded DNA antibodies, with variable association with acute phase reactants such as sedimentation rate and C reactive protein. It is uncommon to have active SLE disease activity without an abnormality of complete blood count with differential (CBCD) or urinalysis. These tests are inexpensive, readily available and provide prompt results.

Recurrent sino-pulmonary infections suggest the possibility of a primary immunodeficiency, especially humoral defects. Workup usually includes CBCD, quantitative immunoglobulins and antibody responses to protein and polyaccharide antigens, typically diphtheria and tetanus, and *S. pneumoniae* respectively. Obtaining an IgA level and the pneumoccocal titers effectively screens for a clinically relevant primary antibody deficiency state. A result of normal levels tends to make the following diagnoses less likely: severe combined immunodeficiency (SCID), x-linked agammaglobulinemia, common variable immunodeficiency, IgG2/IgG4 subclass deficiency, isolated IgA deficiency, and Ataxia-Telangiectasia.