Immunodeficiency Evaluation for Chronic Infections in Adults and Older Children Testing

Click here for topics associated with this algorithm

Rule out:
1. Physical/anatomic lesions, such as foreign body (bronchial), eustachian tube dysfunction, indwelling catheter, or other anatomic abnormalities
2. Cancer
3. Connective tissue diseases
4. Diabetes
5. Renal disease

Then perform the following testing:
1. Comprehensive Metabolic Panel (general health screening for immunodeficiency)
2. CBC with Platelet Count (general health screening for immunodeficiency)
3. Human Immunodeficiency Virus Types 1 and 2 (HIV-1, HIV-2) Antibody with Reflex to HIV-1 Antibody Confirmation by Western Blot
4. Protein Electrophoresis with Reflex to Immunofixation Electrophoresis Monoclonal Protein Detection, Quantitation and Characterization, IgA, IgG and IgM, Serum AND Kappa and Lambda Free Light Chains (Bence Jones Protein), Quantitative, Urine OR Monoclonal Protein Detection Quantitation & Characterization, SPEP, IFE, IgA, IgG, IgM, Serum
5. Sweat chloride (at accredited cystic fibrosis center)
6. If only recurrent sinopulmonary disease – pneumococcal antibody IgG titers pre and post vaccine (1 month)

Immunoglobulin evaluation abnormal
Sweat chloride abnormal
HIV +
No pneumococcal antibodies

ORDER
Cystic Fibrosis (CFTR) 165 Pathogenic Variants with Reflex to Sequencing
Sweat chloride confirmed

Mutation present
Low IgG, IgM, IgA OR poor antibody response

ORDER
Immunglobulin B-Cell Memory and Naive Panel

Low IgG, IgM, IgA
Low IgG2, 4
Pneumococcal vaccine response low

ORDER
Immunglobulin G Subclasses (1, 2, 3, 4)

IgA low
IgA absent

ORDER
Immunglobulin G Subclasses (1, 2, 3, 4)

Immunity consult

Consider monoclonal gammopathy of undetermined significance (MGUS), multiple myelomas, or Waldenstrom macroglobulinemia

Consider monoclonal gammopathy of undetermined significance (MGUS), multiple myelomas, or Waldenstrom macroglobulinemia

Mail order:
B-Cell Memory and Naive Panel

ORDER
Lymphocyte Antigen and Lymphocyte Enumeration Panel

CD11b, CD18
Decreased
CD15
Decreased

Increased
IgE

ORDER
Lymphocyte Antigen and Lymphocyte Enumeration Panel

CD8
Increased

ORDER
Symptomatic treatment

Consider true T-cell deficiency, HIV, CD4 deficiency, adenosine deaminase deficiency, nucleotide phosphorylase deficiency, chronic mucocutaneous candidiasis

Consider monocyte dysfunction

Low neutrophil count

ORDER
Leukocyte Adhesion Deficiency Panel

Myeloperoxidase deficiency

𝓯ור്മAlamat

© 2006 ARUP Laboratories. All Rights Reserved. www.arupconsult.com

Content reviewed: March 2017 Last updated: February 2019