
Provided certain requirements are met, this new practice guideline accepts the negative results of rapid antigen detection testing (RADT) for exclusion of acute streptococcal pharyngitis, without the previously mandated confirmation with a negative culture result. In adults, these requirements include clinical indications only. Culture is not required for uncomplicated cases of acute pharyngitis without supplicative complications (e.g., peritonsillar abscess, cervical lymphadenitis) and without suspected infections with uncommon pharyngeal bacterial pathogens such as C. diphtheriae or N. gonorrhoeae. In a child or adolescent, a negative RADT does not need to be confirmed by culture provided that the clinical considerations above have been met, the child is not believed to be at high risk for Group A Strep suppurrative or nonsuppurrative complications, AND it has been ascertained that the RADT being used is “comparable in sensitivity to a throat culture.”

This latter requirement has been further defined as a RADT, which detects “about” 90% or more of the patients with positive throat cultures. A preliminary study of our results at CMH does not meet this requirement. We are currently detecting only 80% of our culture positive patients. There may be several correctable reasons for this. First, our kit, Abbott Signify, has had some quality control issues that we are addressing by looking at different lot numbers by our current kit and at different kits. Second, there has been some tendency, in RADT borderline cases, to err on the negative side and with the understanding that the culture would identify the positives. The technologists have been instructed to err on the positive side. Finally, the common nursing procedure of simultaneously swabbing the throat with two swabs held together limits the inoculation of the swab. At this time, we will not make any changes in our procedure to culture all RADT negative specimens. However, these new guidelines have provided the impetus for a thorough review of our methods for diagnosing Group A Strep. Everyone will be kept informed of our findings. We welcome your input.

Laboratory Diagnosis of Acute Mononucleosis

EBV PCR has no routine role to play in the diagnosis of Mononucleosis. The appropriate tests include the Mono Spot test and EBV serology (titers) in association with a CBC.

The Mono Spot test, useful in older children, has poor sensitivity in young patients. In 2001, CMH performed 428 EBV serology panels, of which 31 had a positive IgM to the EBV viral capsid antigen and a negative IgG to the nuclear antigen (EBNA), indicating acute EBV infection. Of these 31 patients, 29 also had a MonoSpot test ordered. Among the 14 children under five years old, 11 had negative and 3 had positive Mono Spot tests. Among the 15 children over five years old, 2 had negative and 13 had positive Mono Spot tests.
News From Flow Cytometry
by David Zwick, MD

Congenital Immune Deficiency Disorders:
When to consider and what tests to order.

Children with congenital disorders of the immune system clinically present at various ages and with a variety of infectious and non-infectious conditions that provide clues to the type and severity of immune deficiency. The following are general indications for work-up of a possible underlying immune deficiency disease:

Patient with:

1) Recurring, unexplained, serious infections (not URIs or UTIs), particularly when more than a single site is infected.
2) First time serious infections caused by organisms with low pathogenicity (e.g., Pneumocystis carinii, Candida albicans).
3) Failure to thrive or chronic diarrhea.
4) Positive family history of underlying or suspected immunodeficiency disorder.

This clinical presentation, as well as the following simple screening tests, should serve to target more definitive testing.

- **CBC with Differential and Platelet count** to look for neutropenia, lymphopenia, eosinophilia and morphologic abnormalities in granulocytes (e.g., Chediak-Higashi), and platelets (e.g., low platelet count and small platelets in Wiscott-Aldrich syndrome).
- **Immunoglobulins** low in all permanent types of agammaglobulinemia and selective IgA deficiency. IgE in patients with suspected atopy or hyper IgE (Jobs) syndrome. Immunoglobulin levels are age-related with newborns having little or no IgM and IgA.
- **Immunoglobulin subclasses** in patients with normal IgG but poor functional antibody formation or with selective IgA deficiency and frequent infections.
- **Skin tests** to assess delayed (48 hr) hypersensitivity response (candida, tetanus toxoid, tricophytin). Most infants less than 6 months to 1 year normally do not respond to this testing.
- **Complement C3, C4, and CH50 levels.**
- **Granulocyte Oxidative tests (NBT).** Diagnostic of Chronic Granulomatous Disease of Childhood.
- **Lymphocyte T and B cell enumeration.** Normal B cell numbers in transient hypogammaglobulinemia of infancy in contrast to low B cell number in more serious constitutional immune deficiencies such as Bruton’s Agammaglobulinemia.
- **Isohemagglutinins** in patients older than 1 year, as an indicator of defective Ig production and characteristic of Wiscott Aldrich Syndrome.
- **Chest and upper airway X-rays** looking for thymus and adenoidal adequacy.

For a more extensive listing of the clinical and laboratory clues to immune deficiency disorders and their phenotyp,e as well as what specific tests to order, see intranet site: [http://lion/labweb/guidelines/IDDEFWU.htm](http://lion/labweb/guidelines/IDDEFWU.htm)

### Laboratory CME Series
**Tuesday, December 17, 2002**
12:00 p.m.-1:00 p.m.

**Location:** Laboratory Conference Room #2206.10
**Speaker:** Dr. Carol Saunders
**Topic:** “The Molecular Diagnosis of Mitochondrial Disease”