– Antibiotics should be considered whenever there is a change in pulmonary symptoms; Pseudomonas is treated with two agents with different mechanisms of action

– Most cystic fibrosis patients have some degree of constipation and bowel management is always with osmotic agents

– Do not put CFRD patients on a calorie restricted diet

– Do not put CF patients on a salt-restricted diet

Resources:

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ASK A SPECIALIST: ASK A PATHOLOGIST

October 6, 2014 Ask a Specialist, Issues, October-December 2014 Issue:Volume 6 Issue 4
Keywords autoimmine hemolytic anemia, direct coombs test

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Question:

I ordered a type and screen on my patient, and the blood bank reported that her direct Coombs test was positive. Does that mean my patient has autoimmune hemolytic anemia?

Answer:

The Direct Coombs test, also called the Direct Antiglobulin Test (DAT), is performed by adding reagent antibodies against human IgG and complement, also known as anti-human globulin or Coombs reagent, to the patient's red blood cells. The test is positive if the antibodies cause the red blood cells to agglutinate, indicating that IgG antibodies and/or complement are bound to the surface of the patient's red blood cells in vivo.

The DAT is an extremely sensitive test, and can detect as few as 100 IgG molecules per red blood cell. In comparison, red blood cells from healthy, non-anemic patients generally have less than 60 IgG molecules bound to the surface. The DAT is routinely performed in the blood bank as part of the routine workup for positive antibody screens and after transfusion reactions; the test is also useful in neonates with suspected hemolytic disease of the fetus and newborn and in the evaluation of patients with suspected immune-mediated hemolysis.

A positive DAT alone is not diagnostic of immune mediated hemolysis. Up to 15% of hospitalized patient specimens may have a positive DAT, often as a reactive phenomenon in patients with increased IgG levels due to infection, inflammation, or malignancy. A positive DAT in a patient with no evidence of hemolysis or recent transfusions does not generally require any additional testing.

If the patient does have clinical evidence of hemolysis such as decreasing hemoglobin with elevated LDH, low haptoglobin, or microspherocytes on peripheral smear, a positive DAT suggests that the hemolysis may be immune-mediated. Immune-mediated hemolysis may be caused by warm autoimmune hemolytic anemia, cold agglutinin diease, paroxysmal nocturnal hemoglobinuria, or drug-induced hemolytic anemia.

In a patient with a positive DAT, ask the following questions:

1. Has the patient been recently transfused? If so, consider an acute or delayed hemolytic transfusion reaction.
2. Does the patient have clinical evidence of hemolysis? If so, consider causes of immune-mediated hemolysis.
3. Is the patient receiving drugs which can cause a positive DAT? The list is long, but includes IVIG, RhoGam, penicillins, cephalosporins, procainamide, and many others.
4. Has the patient received a marrow or organ transplant? Passenger donor lymphocytes may produce antibodies against the recipient's red blood cell antigens.

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Clinical Vignettes: HIV associated Lymphoma

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Keywords HIV associated lymphoma

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Questions:

Part 1: A 25-year-old HIV-positive male presents with a four day history of fever and headache. The headache is a dull pain that acutely worsens with coughing. It is unassociated with photophobia, phonophobia, or vision changes, but worsens with fever spike. It is different than the headaches he had when diagnosed with Mollaret's meningitis a month ago and he denies neck stiffness. He also reports fever and night sweats. He denies symptoms of sinusitis. He is not currently being treated for HIV and a month ago his CD4 count was 163 cells/mm^3 and viral load was 196,000 copies/ml. On exam, he has cervical, supraclavicular, axillary and inguinal lymphadenopathy. Head CT was normal. A subsequent cervical lymph node biopsy was performed which reveals large, bi-nucleate cells with inclusion-like nucleoli. A computerized tomography (CT) of the chest, abdomen, and pelvis discovered multiple mesenteric lymph nodes. What type of cancer is the most likely diagnosis?

1. A)Hodgkin lymphoma
2. B)Burkitt lymphoma
3. C)Follicular lymphoma