

THE PATHOLOGY CENTER NEWSLETTER

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Heparin Dependent Platelet Antibody

By Brenda Franks, MT (ASCP)

Heparin is widely used for anti-coagulation during many medical procedures. Two major adverse affects associated with heparin are bleeding caused by an overdose or increased anticoagulant response to a standard dose; the other is heparin-induced thrombocytopenia (HIT). There are two categories of HIT; non-immune thrombocytopenia, formerly known as type 1 HIT, and immune heparin-induced thrombocytopenia, formerly known as type 2 and now synonymous with HIT. Despite the thrombocytopenia in HIT, thrombosis is the culprit, and bleeding complications are not uncommon. The mortality rate in HIT cases associated with thrombosis is approximately 20 – 30%, with an equal percentage of patients becoming permanently disabled by amputation or stroke.

Some patients develop an antibody immune response after a single heparin exposure, however,

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INFLUENZA

By Christian Herdt, MT (ASCP)

What is the flu?

Influenza, or the flu, refers to two respiratory viruses (Influenza Type A and Type B) that can cause epidemic disease in humans during the winter months of the year. These airborne viruses can easily be transferred with routine contact with contagious individuals through sneezing, coughing, or simple talking. Infected individuals are contagious between 3 and 7 days after initial development of illness and can even pass the flu to others before experiencing any symptoms.

The typical flu season peaks between December and March in the United States. Symptoms often include runny nose, sore throat, fever, headache and muscle aches. Diarrhea, nausea, and vomiting have been reported with pediatric cases of influenza, but are rare in the adult population. In comparison to the common cold, severe illness and potential life-threatening complications are associated with influenza. On average 36,000 influenza related deaths a year occur in the USA and an additional 114,000 people are hospitalized because of the flu. Influenza vaccination is the best way to prevent serious illness related to contracting the flu.

Why should I get the flu shot?

The 'flu shot' is a vaccine designed to promote antibody reproduction to components of the influenza viruses. Once a person has developed these antibodies they have a greater ability to prevent contracting influenza. While the flu vaccine is not 100% effective in preventing infection, the

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Heparin Dependent Platelet Antibody

a high dose of intravenous heparin or prolonged heparin administration is more likely to induce HIT. When heparin activates the platelets, there is a release of platelet factor 4 (PF4). Heparin then binds to the released PF4, forming a complex that acts as an antigen complex. The immune response triggers production of an antibody to this complex. The antibody binds to the platelet surface, which activates the platelets. And more PF4 is released, perpetuating the activation cycle. The platelet activation leads to the production of platelet microparticles that promote coagulation and stimulate thrombosis. It is important to note that not all patients that develop the antibody will develop HIT. Of patients receiving heparin therapy, approximately 8% will go on to develop HIT antibodies, and 50% of those patients will develop thrombocytopenia. Thrombosis occurs most often in HIT when the platelet count is decreased by 30 – 50% of the baseline platelet count. Although HIT antibodies can disappear within 2-3 months after heparin discontinuation, future exposure to heparin is contraindicated.

The Pathology Center is currently bringing up a Heparin Dependent Platelet Antibody test to identify the antibody that causes HIT. This test will be used to screen cardiac bypass patients prior to surgery. An anti-coagulant other than heparin is indicated for those patients with a positive screening test. ❁❁



Serology Testing and IVIG

Intravenous Immune Globulin (IVIG) which is given to patients to treat an infectious disease process contains antibodies to a host of different viral, bacterial and parasitic antigens. Therefore, when IVIG is given to a patient these antibodies cause a serological false positive in any serology test run on serum obtained after the administration of the IVIG. The laboratory is unable to distinguish true positives from false positives and the results can not be interpreted. Sometimes the Medical Technologists can tell something is unusual about the results, for example, all serology test are strongly positive or unusual serology tests are positive. This can be misleading to the clinicians and quite possibly lead to inappropriate therapy.

The Methodist Pathology Center strongly recommends that if serology is to be used in the diagnosis of a patient's illness that the serum be obtained before the IVIG is administered. Serum may also be drawn and stored in the laboratory for future testing. ❁❁

SPOTLIGHT ON CLIENT SERVICES

The Methodist Pathology Center Client Services department was formed in January 2001 when we went live with Cerner, our computer system. The department is open Monday through Friday 7:00 AM to 5:00 PM.

Kathy Farrell and Stevie Polley are readily available to answer inquires regarding test results, add-on requests, test requirements and general laboratory information. They handle an average of 120 calls per day and still have time to help with sending Technical Bulletins and Newsletters.



Kathy

Stevie

Kathy has worked at The Pathology Center for almost 13 years. She started as a clerk in phlebotomy, moved to Specimen Control, was a MIS (computer) Coordinator for several years before starting in Client Services when we went live with Cerner.

Stevie has worked at The Pathology Center for over 20 years. She started as a clerk in blood bank and was a MIS (computer) Coordinator for 11 years. Stevie has been in Client Services over a year.

Stevie and Kathy both enjoy talking to the clients and helping with laboratory test questions. Their knowledge of the hospital system and the laboratory has been an asset to everyone. ❁❁

Influenza

antibody response it triggers can play an important role in reducing the severity and duration of illness for persons who do become infected.

Due to the highly adaptive nature of the influenza viruses a new 'flu shot' must be created each year based on data collected from the previous year's influenza epidemic. The vaccination production is an international cooperative effort between organizations, including the World Health Organization, the Center for Disease Control and Prevention, and the Food and Drug Administration. These partners are responsible for selecting the three influenza subtypes (2 Influenza A and 1 Influenza B) included in the current year's vaccine.

Who should get vaccinated?

All healthy adults and children are candidates for receiving the 'flu shot' to help prevent illness, however, some groups of people may have a more urgent need for vaccination compared to the general population. Persons with previously compromised immune status due to long-term illness or disease are at much greater risk of developing life threatening symptoms from the flu and are encouraged to receive vaccination. Persons whose occupations involve close interaction with individuals at risk for developing influenza related complications (healthcare and assisted care providers) should be vaccinated, as should persons in occupations that provide essential roles in society police, fire fighters, municipal utilities workers. The flu vaccine is not recommended for a limited group of people who may have allergies to certain vaccine components or who have experienced reactions to the vaccine in the past. One should contact his/her doctor if they have concerns about receiving the influenza vaccine.

This year has been witness to an unusually early onset of confirmed cases of influenza across the nation, a possible sign of a more severe flu season. ❁❁

MEDICARE PART B COVERAGE

Medicare Part B claims must contain a valid ICD-9 code for each test that is ordered. The Pathology Center requisitions have been redesigned to require an ICD-9 code beside each test that is ordered.

The ICD-9 codes (or narrative diagnosis) must fully explain the signs and symptoms or diagnosis to the highest degree of accuracy and completeness.

The National Coverage Determinations (NCD) guidelines should be followed for the 23 test categories from Medicare. The NCD's list CPT and test names, ICD-9 codes for medical necessity, ICD-9 codes that DO NOT support medical necessity and a list of ICD-9 codes that are never covered. The complete list of NCD's can be found on the web at www.cms.hhs.gov/ncd/ncdindexlist.asp.

If we do not have complete or valid ICD-9

codes, we will call your office before we process the claim. **To help keep phone calls at a minimum**, please review your guidelines for coding. For additional information on NCD's and ICD-9 coding, call The Pathology Center at 354-4541 or 888-432-8980.

CRYOGLOBULINS

Proper collection and transport of the specimen is critical to the outcome of cryoglobulin testing. The patient should be fasting, as lipemia will interfere with the interpretation of the test. Do not refrigerate or freeze the sample at any time. Quantities less than 3 ml may affect the sensitivity of the assay. Collect in a plain red top tube. Do not use a SST tube.

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