

TEST: PLATELET AUTO-ANTIBODY BY FLOW CYTOMETRY

PRINCIPLE:

In diseases where there is a deficiency of platelets, the possibility exists that destruction of platelets is mediated by auto-antibodies to the platelets. Although other methods can be used to detect platelet associated IgG (radioimmunoassay, enzyme assays), flow cytometric analysis is a rapid and accurate method to detect these antibodies and can be used for peripheral blood samples of very small volumes. To detect immunoglobulin on platelet surfaces, aliquots of platelets isolated from plasma are incubated with FITC (fluorescein)-conjugated anti-IgG, anti-IgM, or anti-IgA, washed and then analyzed by flow cytometry to determine the percentage of positive platelets. The advantage of flow cytometry over the other methods is that it is simple, highly reproducible, and sensitive. As little as 5000 platelets/assay can be analyzed, an important consideration for samples in which the platelets count is very low. Patients with idiopathic thrombocytopenia might have auto-antibodies to platelets whereas patients with infections, cancer with sepsis, acute leukemia, or toxic reactions to certain drugs may not.

SPECIMEN REQUIREMENTS:

20 ml heparinized blood. Make sure the blood is mixed well after it is drawn from the patient to prevent clots. Send blood at room temperature. **Do not refrigerate.** Deliver immediately to laboratory within 24 hours.

METHOD: Flow Cytometry

REFERENCES:

Lazarchick, J. and Hall, S. Platelet-associated IgG assay using flow cytometric analysis. J. Immunol. Meth. 87:275, 1986.

Normal Range: Negative

Reported as negative or positive

Turnaround Time: One Week