



# Diagnosis, Treatment, and Management of Immune Thrombocytopenia

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Management of immune thrombocytopenia (ITP) requires accurate assessment and evaluation, appropriate treatment strategies, and timely nursing interventions (e.g., monitoring, bleeding prevention, patient education). The overview of ITP in the current article reviews its etiology and provides updates about medical management and key components of nursing care.

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Nurses working in any setting may see patients with immune thrombocytopenia (ITP), which also is referred to as idiopathic thrombocytopenic purpura. ITP is defined as a low platelet count when no other cause can be identified. ITP is an immune destructive process with a low production of platelets from the bone marrow (Neunert et al., 2011). Primary ITP is a distinct disorder, but secondary ITP occurs because of other illnesses, such as HIV, hepatitis C virus, infection or sepsis, liver disease (e.g., cirrhosis), and myelodysplasia or bone marrow disorders (Neunert et al., 2011). Secondary ITP also can occur in patients undergoing chemotherapy. Life-threatening bleeding from ITP occurs more often in patients aged 60 or older, with rates of 10%–13% per patient per year (George, 2013). For patients with chronic ITP, the platelet count is abnormal but they do not require treatment (George, 2013). Those patients generally have platelet counts greater than  $50 \times 10^3 \text{ mm}^3$ . Normal platelet count in healthy adults is  $150\text{--}400 \times 10^3 \text{ mm}^3$ .

Patients may present with ITP without any specific symptoms. ITP often is diag-

nosed when patients have a routine complete blood count (CBC). Some patients may complain of easy bruising or bleeding, but symptoms of ITP are minimal. More women than men are diagnosed with ITP, particularly during pregnancy. ITP also can occur in children. Children often have spontaneous remissions from ITP, which are more rare in adults (George, 2013).

## Assessment

When patients present with a low platelet count on a CBC, a complete review of medications should follow, as well as a full medical history and physical examination. In addition to certain illnesses, many medications can cause a low platelet count. Medications that can affect platelet count include acetaminophen, cimetidine, bactrim, tamoxifen, haloperidol, diazepam, alemtuzumab, famotidine, heparin, rifampin, quinine, and methyl-dopa (Neunert et al., 2011). If a medication is suspected of contributing to a diagnosis of ITP, it should be discontinued to determine if the platelet count recovers. Patient medical history should focus on issues of

previous bleeding from surgeries or tooth extractions. Menstrual cycles and patterns of heavy flow should be assessed as well. Physical examinations should evaluate bruising, petechiae, and splenomegaly. Examination of the mouth may reveal petechiae or mucosal hemorrhage.

Blood count evaluation with manual differential identifies sizes and shapes of cells, including platelets, white blood cells, and red blood cells. ITP can occur with other health issues (e.g., anemia, neutropenia). A bone marrow biopsy to rule out a myeloproliferative disorder or myelodysplasia is not warranted unless the patient is aged 60 years or older (Provan et al., 2010).

A single test cannot diagnose ITP, so the diagnosis occurs through process of elimination. When ITP is suspected, healthcare providers test for HIV, *Helicobacter pylori*, and quantitative immunoglobulin, as well as perform blood group typing to determine treatment for ITP. Studies do not show that platelet antibody results lead to a diagnosis of ITP (Provan et al., 2010). To evaluate spleen and liver size, an abdominal ultrasound may be performed. Splenic enlargement may occur because of sequestration of platelets.

## Treatment

Once ITP is diagnosed, treatment decisions follow. Patients often do not have bleeding issues unless the platelet count is less than  $30 \times 10^3 \text{ mm}^3$ . Some patients do not have bleeding with a platelet count of less than  $10 \times 10^3 \text{ mm}^3$ , but their risk of bleeding increases. Treatment decisions should weigh the risks of treatment side effects with effective treatment outcomes. Side effects from ITP treatment can negatively affect quality of life. Treatment may