



No. 61 - Bone Marrow Biopsy and ITP: “Wasn’t I Supposed to Get One?”

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Title: **Bone Marrow Biopsy and ITP: “Wasn’t I Supposed to Get One?”**

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I recently met a patient in the clinic who was referred for a possible diagnosis of ITP. She seemed a bit more nervous than most patients when I first met her, and I soon learned her anxiety stemmed from her fear of having a bone marrow biopsy performed. Her close friend told her the story of her grandfather’s diagnosis of ITP and the bone marrow biopsy that he had to undergo. She was relieved when I told her that she would not likely need a bone marrow biopsy after my evaluation of her case (and she didn’t need one). So when a diagnosis of ITP is suspected, which patients need to undergo a bone marrow biopsy?

Understandably, the mention of a bone marrow biopsy procedure brings on significant anxiety for patients. A bone marrow biopsy procedure is intended to sample the fluid in the bone marrow cavity of the pelvis (to evaluate where the blood cells are produced), but also to obtain a “biopsy” of the bone marrow itself for physicians to understand how the bone marrow is functioning in its production of blood cells. It is typically performed when there is concern for abnormal bone marrow function based upon the presence of low levels of blood cells (white cells, red cells, and platelets) or concern for a cancer involving the bone marrow (leukemia or lymphoma) when abnormal cells are found circulating in the peripheral blood.

Historically bone marrow biopsies were performed in all suspected ITP patients who were over the age of 60 to exclude a diagnosis of myelodysplasia (MDS). MDS is best described as a pre-leukemic condition that is more common in older adults. MDS can initially present with low blood white blood cells, red cells, and platelets and could initially look like ITP. Since there are no tests that can specifically diagnose ITP, and therefore the diagnosis of ITP is based upon excluding other explanations for the low platelet count, then you can understand why many patients with suspected ITP underwent bone marrow biopsy procedures in the past.

In recent years physicians no longer routinely perform bone marrow biopsy procedures in patients with suspected ITP. Bone marrow biopsies are only done in a few patients with other clinical or laboratory features present that raise suspicion for another blood disease other than ITP (abnormal cells in the blood, a low white blood cell count or anemia, enlarged spleen or lymph nodes, or concerning symptoms such as pain, fever, and drenching night sweats for example) will undergo the procedure to exclude other bone marrow diseases as the cause of the low platelet count. This approach is now common in both in pediatric and adult patients. Bone marrow biopsies may also be considered in patients with suspected ITP who have failed to respond to standard treatments including steroids and IVIG. It is expected that roughly 2/3 of patients will respond to steroids or IVIG treatments, but when they do not physicians may consider a bone marrow biopsy to evaluate the possibility of an alternative diagnosis. This may be especially true if a physician is referring a patient for a splenectomy. In these cases the doctor is trying to exclude other diagnoses (that might not improve with splenectomy) before the patient undergoes the surgical procedure.

The end result of this change is that fewer patients with suspected ITP will undergo a bone marrow biopsy. This routine use of the bone marrow biopsy in ITP patients over the age of 60 has largely

been replaced by a careful history, and review of the available blood tests to exclude other bone marrow disorders.