**Pro/Con Debate: Anaphylaxis vs. Mastocytosis: A bone marrow biopsy is always necessary**

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1. In patients with anaphylaxis (severe hypotension, Hymenoptera sting reactions, recurrent episodes without triggers)
2. Review data on frequency of patients presenting with anaphylaxis and elevated tryptase who have mast cell activation syndrome or mastocytosis

I. Complications from Bone Marrow puncture and biopsy: Rare (0.07% in non-mastocytosis patients from a series in UK: (Bain BJ. Morbidity associated with bone marrow aspiration and trephine biopsy - a review of UK data for 2004. Haematologica 2006;91:1293-4)

II. In patients with anaphylaxis, a bone marrow biopsy is not always necessary

a. From a series of 601 patients from a single, referral, university practice (excluding from Hymenoptera stings and allergen immunotherapy SCIT) and in which 59% had idiopathic anaphylaxis, 3 (0.5%) patients were diagnosed with systemic mastocytosis (Webb LM, Lieberman P. Anaphylaxis: A review of 601 cases. Ann Allergy Asthma Immunol 2006;97: 39-43)

b. If severe hypotension or recurrent episodes without triggers (idiopathic anaphylaxis), serum tryptase may be elevated acutely but returns to normal with a T ½ of 2-3 hours for most patients. A minor criterion for diagnosis of mastocytosis includes serum tryptase of > 20 ng/mL...consistently.

c. Mastocytosis is rarely identified or overlooked in patients with idiopathic anaphylaxis. There is a broad differential diagnosis of anaphylaxis. Is there evidence of urticaria pigmentosa (red to light brown-salmon colored macules that urticate with stroking)? (Greenberger PA. Idiopathic anaphylaxis. Immunol Allergy Clin N Am 2007;27: 273–293).

d. 2010 AAAAAI, ACAAI, JCAAI Practice Parameters re Idiopathic Anaphylaxis: “60. There might be a need for specific laboratory studies to exclude systemic disorders, such as indolent systemic mastocytosis. This might include a measurement of serum tryptase when the patient is asymptomatic, measurement of total tryptase during or within 4 hours of an acute episode, and the ratio of mature (β) tryptase to total tryptase during an episode.” Regarding a bone marrow examination, “A bone marrow examination may be indicated in patients with a diagnosis of idiopathic anaphylaxis even in the absence or elevated tryptase levels if salmon colored, hyperpigmented macules and papules consistent with urticaria pigmentosa are found.” JACI 2010 (Sept); e1-42.

e. In the series of 335 patients with idiopathic anaphylaxis, routine quantitative immunoglobulins were not obtained empirically, but 1 patient had benign monoclonal gammaopathy, and another elevated total IgE that varied with episodes of idiopathic anaphylaxis (Ann Allergy Asthma Immunol 1996;77:285-91, Am J Med 1984;76:553-6). There were no cases of urticaria pigmentosa or indolent systemic mastocytosis.