Ventricular tachyarrhythmia in a 78 year old woman with syncope: A rare and potentially fatal adverse effect of anagrelide

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Anagrelide is a phosphodiesterase-3 inhibitor used in the treatment of essential thrombocythemia. It decreases platelet production by inhibiting the maturation of megakaryocytes. Cardiovascular side effects such as ventricular tachycardia are rare but potentially fatal and should be made known to patients before starting the medication. A 78 year old woman with a history of hypertension and essential thrombocythemia presented to the emergency department after an episode of syncope. Witnesses reported that she fell face-first onto the pavement with a 30-second loss of consciousness. There was no associated prodromal symptoms. She was recently started on Anagrelide. Systems review, vital signs and physical exam were unremarkable except for facial hematomas, right eyelid laceration and a depressed right maxilla. Laboratory exams were normal. Electrocardiogram showed normal sinus rhythm with a QTc of 0.458. Anagrelide was discontinued. Head CT showed a fracture of the right frontal maxillary process and orbital floor but no intracranial hemorrhage. Brain MRI/MRA was negative for acute stroke. Electroencephalogram was normal. Echocardiogram was normal. Electrophysiology study with procainamide infusion revealed no inducible ventricular tachyarrhythmia. She was discharged home in stable condition off Anagrelide. The mechanism of Anagrelide cardiotoxicity results from an increase in cyclic adenosine monophosphate and activation of cardiac beta receptors leading to its positive inotropic and chronotropic effects. Its cardiac side effects include palpitations, heart failure, syncope, sudden death from torsades de pointes and tachycardia-induced cardiomyopathy if left unrecognized. Such cardiotoxicities are reversible with cessation of use.

Biography
Mary Rodriguez Ziccardi has completed his MD at the age of 23 at the Universidad Central de Venezuela in Caracas, Venezuela’s capital city. She is currently a first year resident in Internal Medicine at Einstein Medical Center, Philadelphia.

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