

Title: Presentation of Chronic Anemia: A Near Miss of Medical Emergency**Author(s): Mythri Mudireddy MD, Rangit Vallapureddy, Keyvan Ravakhah MD****Affiliation:** St. Vincent Charity Medical Center - Department of IM

"Anemia is more prevalent in women of childbearing age. In few cases the cause may be readily apparent, however, in many, it is multifactorial or overlooked. Anemia in the setting of concomitant cytopenias with atypical clinical presentation requires high degree of clinical suspicion and thorough evaluation. An accurate diagnosis of the underlying condition is essential for timely intervention to improve patient prognosis. We report a case of acquired thrombotic thrombocytopenic purpura (TTP) who presented with chronic anemia, thrombocytopenia and mild, transient neurological manifestations.

A 37-year-old G6P5 African American female presented to the emergency department (ED) with slurred speech, right upper extremity and right facial numbness for an hour. She had a significant medical history of menorrhagia, hypertension and marijuana use disorder. Her symptoms including slurred speech and numbness resolved shortly after arriving to ED. She also reported heavy vaginal bleeding at presentation. Initial vital signs showed elevated blood pressure. Physical exam was notable for active vaginal bleeding with clots. Labs at presentation were significant for normocytic anemia with hemoglobin of 8.0 g/dL, thrombocytopenia (59 k/UL) and mild hypokalemia (3.3 mmol/L). Brain CT was negative for intracranial pathology. Abdomen/pelvis ultrasound revealed markedly heterogeneous bulky uterus with extensive fibroid. She was further evaluated for severe thrombocytopenia. Lab results showed low haptoglobin (<8 mg/dL), elevated lactate dehydrogenase (512 U/L). Prothrombin time, partial thromboplastin time, fibrinogen activity and creatinine were normal. Peripheral blood smear (PBS) showed numerous schistocytes and nucleated red blood cells, suggestive of microangiopathic hemolytic anemia (MAHA). Presumptive diagnosis of thrombotic thrombocytopenic purpura was made. The patient received IV steroids, two units of fresh frozen plasma (FFP) and was transferred to tertiary care center for plasma exchange (PEX) therapy. ADAMTS13 activity drawn prior to FFP transfusion was measured as <2% and the diagnosis of acquired TTP was established. At the tertiary care center, she received PEX therapy for 3 days along with IV steroids. Platelet count (59-->410) and ADAMTS13 activity (2%-->40%) were significantly improved following PEX therapy.

This case exemplifies the unusual presentation of TTP with mild clinical features and underscores the importance of careful evaluation of PBS in any patient presenting with cytopenias. TTP is a clinical diagnosis suspected in patients presenting with MAHA and thrombocytopenia with or without clinically evident etiology. The diagnosis is established by autoantibody-mediated deficiency of ADAMTS13 activity, typically <10%. It is a medical emergency, almost always fatal with a mortality rate of 90% without prompt intervention. PEX is the mainstay of treatment. Administration of glucocorticoids and rituximab is suggestible for

presumptive or confirmed cases of TTP. Caplacizumab treatment is recommended for severely ill patients with neurological symptoms or elevated troponin levels."