

Complexities of Chronic Pain Management for an Essential Thrombocythemia Patient

Ashley Haynes, MD, Paige McLaughlin, MD, Francis Navarra, MD
Department of Anesthesiology & Pain Medicine; Temple University Hospitals, Philadelphia PA



Introduction

Essential thrombocythemia (ET) is a relatively rare condition (~1.5- 2.0 cases per 100K) characterized by increased circulating platelets due to proliferation of abnormal megakaryocytes. Most patients are asymptomatic at diagnosis. Complications include bleeding and thrombosis.

A JAK2 V617F mutation independently increases the risk of vascular events. Even though age >60 and thrombocytosis > 600K are high risk factors for hemorrhage or thrombotic episodes in ET patients, there is no correlation between complications and the degree of thrombocytosis.

International Prognostic Score of Vascular Complications for Essential Thrombocythemia

RISK FACTORS	RISK FACTORS SCORE
Age >60	1
Prior Thrombosis	2
JAK2 V617F mutation	2
Cardiovascular Risk Factors (i.e. DM, HTN, smoking)	1

Total score: 0 to 1, low risk; 2 to 5, intermediate risk; ≥6, high risk.

Material & Methods

As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per Temple University policy.

Patient informed consent was obtained for publication of case.

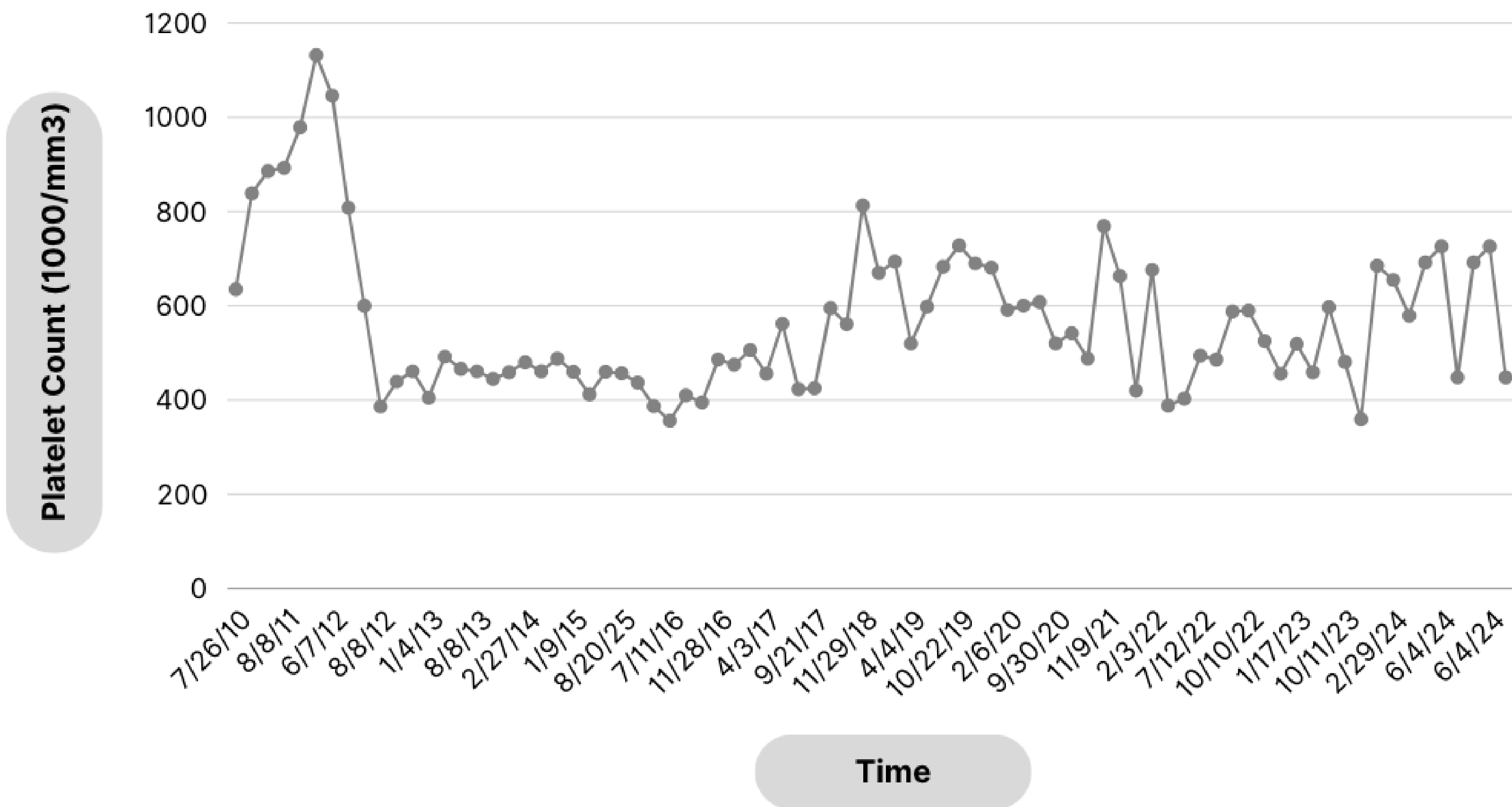
Case Presentation

A 72 year-old- female with history of JAK2 V617F ET, cardiomyopathy, HTN, and A fib (on Eliquis) presented with chronic LBP which radiated into the bilateral lower extremities. She was found to have lumbar spondylosis characterized by multilevel degenerative changes, broad-based disc bulges at L3-L4 and L4-L5 that resulted in significant canal stenosis, bilateral recess stenosis, bilateral facet arthropathy, and ligamentum flavum infolding.

She had no prior thrombotic event but remains at high risk given her age and Jak2 mutation. She reported occasional bruising at sites of prior trauma. Surgical history was notable for knee surgery in 2016 without excessive intraoperative bleeding, but a post-operative Hgb drop one week after surgery requiring 4 units of pRBCs. Prior to her knee surgery, aspirin was held for one week with warfarin given on discharge. No subsequent episodes of bleeding reported on her current antiplatelet therapy with aspirin and anticoagulation with Eliquis. For management of her ET, she takes hydroxyurea daily. Platelets at initial pain management visit was 487K with an average ~ 580K.

The plan for a L3-5 anterior lumbar interbody fusion and L3-S1 posterior spinal fusion with orthopedic surgery late 2023 has been on hold. A second opinion was pursued by the patient with Neurosurgery; no new recommendations at present. Pending definitive surgical management, a multimodal analgesic approach was employed. With several competing medical comorbidities (ET, Afib on Eliquis and aspirin for cardiovascular risk reduction), potential spinal interventions were deferred. Preliminary medication trials have included Gabapentin, Motrin and Tylenol #3. The current combination of Tramadol 50mg and aquatic PT has proven most beneficial to the patient.

Platelet Trend



Discussion & Conclusion

Frequently used in treating radicular LBP, epidural injections can provide long term benefit and prevent the immediate need for surgery. An epidural hematoma is a rare complication that can occur after spinal interventions such as epidural injections. Although not an absolute contraindication, spinal pain interventions should be used with caution among patients with ET.

Patients with ET are at varying risk of hemorrhage and thrombotic episodes, making complications such as an epidural hematoma more common than in the general population. Alternative multimodal options including physical therapy and medication trials can be a beneficial bridge to more definitive management with reduced complications.



Figure 1: Sagittal T2 Weighted MRI of the Lumbar Spine

References

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