

A Case Report : Successful Conservative Management Of Phlegmasia Cerulea Dolens In Non-vascular Center

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INTRODUCTION

Venous thromboembolism (VTE), remain important preventable sources of morbidity and mortality. One of the uncommon conditions that can result from acute, massive venous thromboembolism are phlegmasia alba dolens (PAD) and phlegmasia cerulea dolens (PCD) which affects the lower extremity. Phlegmasia is rarely encountered and it is significantly associated with high incidence of mortality and limb loss. The term phlegmasia is used to describe an extreme spectrum of lower extremity of deep venous thrombosis, that will subsequently progress to critical limb ischemia and results in potential limb loss if wrongly diagnosed. This entity was first described by Fabricius Hildanius in the 16 century, and then in 1938, it was Gregoire who coined the term phlegmasia cerulea dolens translating to "painful blue inflammation," differentiating it from the more commonly seen phlegmasia alba dolens or "painful white inflammation."^[1] Phlegmasia alba dolens is a result of compromise of arterial inflow secondary to extensive clot burden and phlegmasia cerulea dolens is more advanced progression of this condition, resulting from an extensive total or near total occlusion of the deep and superficial venous drainage systems of a limb. It is associated with up to 40% mortality while up to 50% of presenting patients may require limb amputation^[2]. Malignancy remains the most common risk factor, seen in 20-40% of cases, with slightly more males than females being affected, and the left lower extremity up to four times more likely to be affected than the right^[2,3]. Patient usually will complaints of symptoms of severe sudden onset pain, swelling and cyanosis of the affected limb due to blocked drainage of the venous circulation. This condition will subsequently progress to venous congestion, fluid sequestration, arterial insufficiency and ischemia of the affected limb. Without prompt intervention, this can progress to venous gangrene and compartment syndrome (CS) with resulting metabolic and hemodynamic deterioration that often leads to loss of limb or death.

CASE REPORT

A 37 years old male with a background of uncontrolled hypertension and diabetes mellitus presented to our centre with a sudden severe left lower limb pain of four hours duration, associated with swelling, redness and was unable to move his left lower limb. He denies history of trauma or shortness of breath. He is working as a lorry driver and an active smoker. His vital sign was hypertensive (146/101) with hyperglycaemia (25.6mmol/l). On examination, left lower limb was bluish and had reduced temperature. It was associated with tenderness on palpation with delayed capillary refill time more than 2 seconds. Motor examination of left lower limb was 2/5 and the sensation was intact. Doppler examination showed biphasic signal on bilateral femoral artery, popliteal artery, posterior tibial artery and dorsalis pedis artery. Computed tomography angiography of bilateral lower limb had no evidence of acute thrombosis of bilateral lower limb arteries. However, ultrasonography doppler of left lower limb revealed long segment left leg deep venous thrombosis, extending from left popliteal vein until left external iliac vein. Patient was started on heparin infusion for 48 hour and complete revascularization noted. Physical examination of his left lower limb showed marked improvement with increasing warmth and capillary refill time less than 2 seconds. His motor power increased to 5/5. Subsequently, anti-coagulant treatment was overlapped with oral anti-coagulant, tablet rivaroxaban for three months. He was able to resume his daily activities since then.



Figure 1: Left lower limb on admission showing left lower limb oedema with congested bluish-purple discolouration of the limb.



Figure 2: Latest condition of the left limb of the patient showing no more congestion and the colour of the skin returning normal

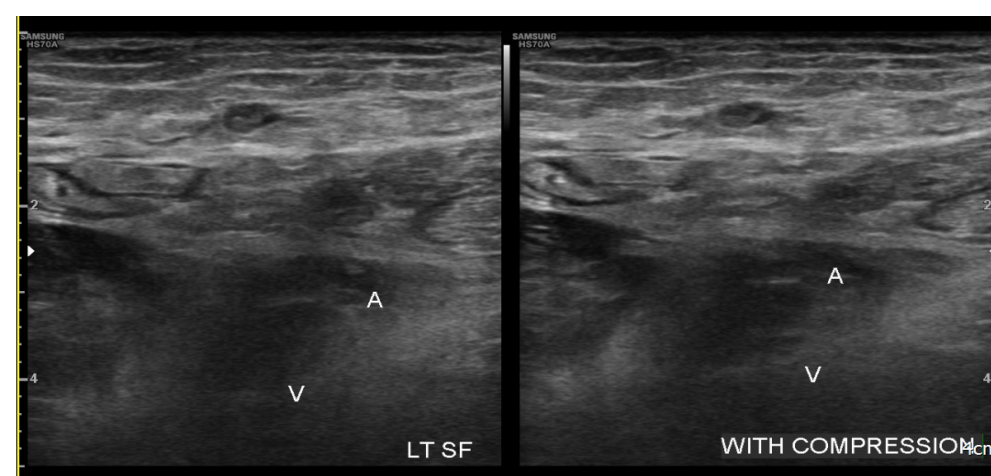


Figure 3: US doppler at level of left saphenofemoral junction showed presence of thrombus within the vein that was non-compressible

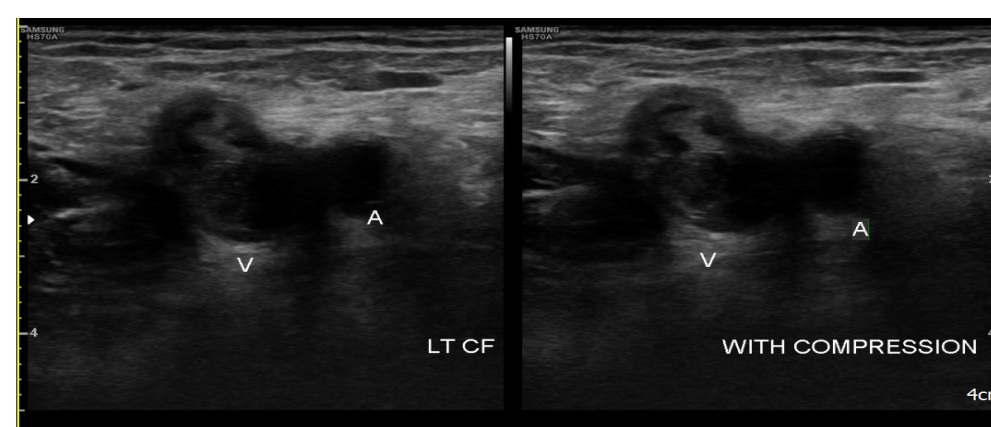


Figure 4: US doppler at level of left common femoral junction showed presence of thrombus within the vein that was non-compressible

DISCUSSION

Phlegmasia cerulea dolens is a rare clinical condition caused by diffuse venous thrombosis that is characterized by sudden pain, swelling, purple ecchymosis due to arterial ischemia with loss of peripheral distal pulses. It is crucial to promptly identify this condition for early intervention and management. There are multiple of choices of treatment in treating PCD which has successful results other than conservative management. A tailored approach depending on the patient's condition with underlying comorbidities need to be considered in implementing a proper treatment management to avoid morbidity and cause mortality to the patient. Therefore, a prompt diagnosis and management in this condition for limb saving condition and avoid further dreaded complications to the patient.

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