

Paget Schroetter syndrome imaged in multiple modalities and successfully treated with pharmacomechanical thrombectomy

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DESCRIPTION

A young man in his early 30s presented with a 3-day history of left upper arm swelling and erythema (figure 1). He had no significant medical history. Of note he had a strong family history of deep venous thrombosis (DVT) with both parents having had lower limb DVTs. D-dimers were elevated, and the remaining laboratory investigations were within normal limits.

An upper limb Doppler ultrasound scan showed occlusive thrombus in the left subclavian vein

(figure 2). A CT venogram further delineated the extent of the thrombus confirming the diagnosis of Paget Schroetter syndrome (figures 3 and 4). Subsequently, a conventional venogram was performed in conjunction with a therapeutic pharmacomechanical thrombectomy, which successfully restored flow in the left subclavian vein (figures 5 and 6).

Paget Schroetter syndrome, also known as effort thrombosis, is an uncommon disorder resulting in spontaneous subclavian venous thrombosis. Generally, it occurs in young and healthy adults.¹ The subclavian vein is vulnerable to thrombosis due to its positioning relative to the first rib and clavicle.¹

Signs of upper limb DVT should be investigated by Doppler ultrasound scan. However, if thrombosis is present within the non-compressible region of the clavicle, ultrasound may be falsely negative.² MR or CT venogram is recommended if index of suspicion is high after a negative Doppler ultrasound scan.²

Management options include preadministration of thrombolytics prior to mechanical aspiration in



Figure 1 Erythematous, oedematous left upper limb.

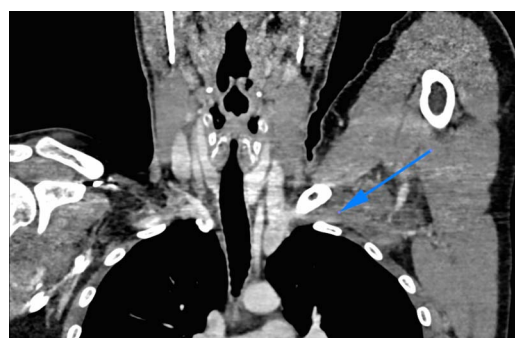


Figure 3 CT venogram coronal slice. Blue arrow: thrombus in the left subclavian vein.

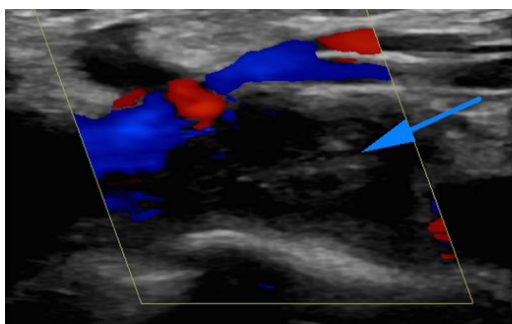


Figure 2 Doppler ultrasound scan. Blue arrow: occlusive thrombus in the left subclavian vein.

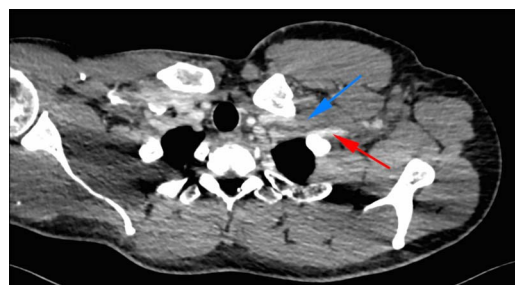


Figure 4 CT venogram axial slice. Blue arrow: occluded left subclavian vein. Red arrow: patent left subclavian artery.



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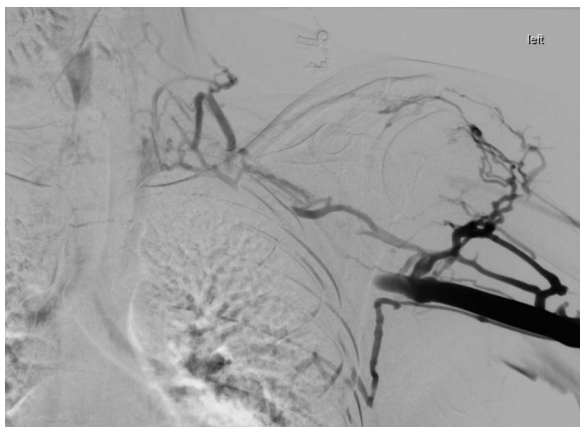


Figure 5 Venogram prethrombectomy.



Figure 6 Venogram post-thrombectomy.

interventional radiology as in this case or therapeutic anticoagulation for 3–6 months.³ Thrombosis may recur in up to a third of patients if the predisposing venous impingement is not addressed. Surgical decompression of the subclavian vein is

often performed to this end, for example, excision of the first rib.¹ One study followed 50 patients who received thrombolysis followed by anticoagulation and no surgical intervention. Interestingly, it found that 82% of patients were asymptomatic at 57 months post-thrombolysis.¹

Learning points

- ▶ Paget Schroetter syndrome is rare but should be ruled out in young patients presenting with signs and symptoms of upper limb deep venous thrombosis.¹ Repetitive strain and subsequent subclavian vein impingement is thought to be the underlying aetiology.
- ▶ Doppler ultrasound scan can be falsely negative if thrombosis is present within the non-compressible region of the clavicle.² If there is persistent clinical concern, a CT or MR venogram should be performed.
- ▶ Catheter-directed pharmacomechanical thrombectomy is usually successful if initiated within 14 days of thrombus formation.¹ Post-thrombolytic surgical decompression of the subclavian vein is often performed to prevent future thrombosis; however, certain patients may remain symptom-free without surgical intervention.¹

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Patient consent Obtained.

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