

PVSS22 Multimodality Percutaneous Intervention For Critical Venous Occlusive Disease

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PURPOSE: Critical deep venous thrombosis and occlusion constitutes a small percentage of patients with venous disease. However, these patients exhibit severe symptomatology including pain and massive edema that may progress to limb- or life-threatening complications including phlegmasia cerulea dolens and superior vena cava syndrome syndrome. These conditions have been resistant to conventional surgical therapy. This study examined the results of multimodal percutaneous therapy for the treatment of complex critical venous thrombotic and occlusive disease.

METHODS: 25 patients presented with critical venous thromboses or occlusions (13 debilitating unilateral lower extremity edema, 2 debilitating bilateral lower extremity edema, 1 phlegmasia cerulea dolens, 2 venous claudication, 2 SVC syndrome with respiratory compromise, 4 debilitating upper extremity edema, 1 renal insufficiency). Multiple therapeutic modalities were used in all cases (Table) in conjunction with long-term systemic anticoagulation. The venous access site was determined by the anatomic location of the lesion and included popliteal (12, 2 bilateral), femoral (7), brachial (6), lesser saphenous (2),

Thrombolysis	Mechanical Recanalization	Venoplasty	Stent	Retrievable IVC Filter	Ultrasound Guidance	Total
20	3	19	15	3	15	75

RESULTS: Resolution of symptoms was achieved in 18 / 25 patients (72%) and partial resolution occurred in 4 / 25 (16%). 83% of these patients exhibited continued resolution of thrombosis that was confirmed by duplex ultrasound surveillance. Failure of treatment identified as both lack of clinical response and evidence of continued venous thrombosis occurred 3 of 25 patients (12%). Restoration of arterial pulses and limb salvage was achieved in the patient with phlegmasia cerulea dolens and acute limb-threatening ischemia. Both patients with superior vena cava syndrome experienced resolution of respiratory compromise and facial edema. The mean length of follow-up was 11 ± 2.7 months. Complications included transfusion requirement (2), hematuria (2), retroperitoneal hematoma (1), cellulitis (1).

CONCLUSION: Acute critical venous thrombotic and occlusive disease is responsive to multimodal percutaneous treatment including thrombomechanical recanalization, thrombolysis, venoplasty, stent placement and anticoagulation. Relief of pain as well as acutely life- and limb-threatening conditions in this most severely symptomatic subset of patients represents the immediate goal of treatment. The impact of multimodal therapy on the subsequent development of chronic venous complications including post-thrombotic syndrome remains to be defined.