Objective: To evaluate the use of mechanical aspiration thrombectomy in the treatment of iliofemoral deep venous thrombosis (DVT).

Methods: Aspiration thrombectomy was performed in 22 patients with iliofemoral DVT between September 2014 and June 2017. Results: Aspiration thrombectomy was performed in 30 symptomatic limbs in 22 patients (male:female 9:13, mean age 51) with iliofemoral DVT. Patients had a history of prior DVT (50%), IVC filters (40.9%), and iliac vein stents (18.2%). Intervention took place within 2.8 (2.9) days of presentation, and 18 (81.8%) patients presented within 14 days of symptoms. All 30 limbs were treated with Indigo aspiration thrombectomy. In addition to the Indigo system, AngioJet was used in 8/30 limbs, and balloon angioplasty and stenting were performed in 23(77%) and 8(27%) limbs respectively. Overnight lysis was performed in 24(80%) limbs, and 12 limbs (40%) received intra-operative thrombolysis. At the completion of the procedure, IVUS demonstrated successful recanalization in 27/30 (90%) of limbs, with < 30% residual stenosis in 18(60%) limbs, partial success with some chronic clot remaining in 9 (30%) limbs, and 3 (10%) remaining occluded. Kaplan-Meier estimates of primary patency were 96.3%, 88.9%, 81.5%, and 76.4% at 30-days, 3-months, 6-months, and 1-year. In an average of 17 months of follow-up, six limbs in five patients re-occluded (one at 10 days post-op and the others within 1 year). Angioplasty and stenting were performed in 4 limbs in 3 patients to treat re-occlusion, and in one patient the treated limb re-occluded a second time (within 16 days of secondary intervention). Presenting symptoms were mostly pain (24/30 limbs, 80%) and edema (29/30 limbs, 97%). By 30 days, pain and edema had improved in 22/30 (73%) and 24/30 (80%) limbs. There were no procedure-related deaths for the duration of the follow-up, and no instances of major or minor bleeding, renal failure, pulmonary embolism, or limb loss in any patients.

Conclusions: The Indigo aspiration thrombectomy system is safe and effective in treating iliofemoral DVT. Adjunctive lysis and angioplasty with or without stenting is needed in most of these patients. More studies with a larger number of patients and longer follow up are needed to further solidify the benefit of this therapy in the treatment of occlusive iliofemoral DVT.

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