

Interventional Cardiology

Catheter directed thrombolysis in the management of proximal lower limb deep venous thrombosis – A prospective study with 6-month follow-up.

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Background: Catheter-directed thrombolysis (CDT) with assisted mechanical thrombolysis is the standard of medical care for proximal deep vein thrombosis (DVT). We studied the immediate and intermediate (six months) safety and effectiveness of CDT in patients with proximal lower limb DVT.

Methods: Thirty consecutive patients aged between 20–70 years with proximal lower limb DVT formed the study group. CDT was done with streptokinase infuse through a catheter kept in the ipsilateral popliteal vein. Un-fractionated heparin (UFH) was given along with streptokinase. Mechanical thromboaspiration using guiding catheter was performed in addition to thrombolytic therapy. After 6 months, post-thrombotic syndrome (PTS) and deep venous patency were assessed by using Villalta scale and duplex ultrasound, respectively.

Results: Thirty patients with proximal lower limb DVT were treated with CDT. Mean age of the study patients was 41.7 +/- 15 years. Mean duration of illness was 13.3 +/- 12 days. The mean duration of thrombolysis was 4.5 +/- 1.3 days. Grade III (complete) lysis was achieved in 10 (33%) and grade II (50%–90%) lysis in 20 (67%) of patients. Patients with significant residual lesion in grade II lysis following CDT underwent percutaneous transluminal angioplasty alone (12/20) or venous stenting (8/20). All patients improved clinically following CDT or assisted CDT. Four patients (13%) developed pulmonary embolism during course of hospital stay and among them 2 (6.5%) patients died. Eleven patients (37%) had minor bleeding or hematoma at local site, and 7 (23%) developed anemia requiring blood transfusion and 4 (13%) patients had thrombocytopenia. After 6 months, iliofemoral patency was found in 20 (72%) and PTS was seen in 6 (21%) patients. Two (6.5%) patients died during follow-up due to nephrotic syndrome and carcinoma breast.

Conclusion: CDT and conventional manual aspiration thrombectomy is an effective treatment for proximal lower extremity DVT with good short and intermediate outcome.

Outcome of venous stenting following catheter directed thrombolysis for acute proximal lower limb venous thrombosis: 1-year follow-up

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Background: Catheter-directed thrombolysis (CDT) with assisted mechanical thrombolysis is standard of medical care for proximal

deep vein thrombosis (DVT). Functional outcome of venous stent placement for the management of acute iliofemoral DVT following CDT, remain undefined. The purpose of this study was to assess immediate and long term outcomes among patients treated with venous stenting following CDT in patients with proximal lower limb DVT.

Methods: Thirty consecutive patients aged between 20–70 years with proximal lower limb DVT formed the study group. CDT was done with streptokinase and un-fractionated heparin (UFH) infusion. Patients with residual venous obstruction and/ or large clot burden were treated further with venous angioplasty and/ or stenting. After 12 months, post-thrombotic syndrome (PTS) and deep venous patency were assessed by using Villalta scale and duplex ultrasound, respectively.

Results: Thirty patients with proximal lower limb DVT were treated with CDT. Patients with significant residual lesion following CDT underwent percutaneous transluminal angioplasty alone (12/20) or venous stenting (8/20). We studied 8 (5 female and 3 male) patients with 9 (3 left and 6 right) limb involvement and 13 stent (7 balloon expandable and 6 self expandable) placement. All patients improved clinically immediately following venous stenting. One patient developed pulmonary embolism during course of hospital stay. One patient had stent restenosis and one patient died due to carcinoma breast during follow-up. Only one patient developed PTS.

Conclusion: Deep venous stenting is a safe and effective mode of treatment in proximal lower limb DVT with high long term patency rate.

Catheter directed thrombolysis along with mechanical thromboaspiration versus anticoagulation alone in the management of lower limb deep venous thrombosis – A comparative study

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Background: Catheter-directed thrombolysis (CDT) with assisted mechanical thrombolysis is now considered as the standard of medical care for deep vein thrombosis (DVT).

Rationale: The study was to describe the immediate & long term (six months) safety and effectiveness of CDT in patient with lower limb DVT compared with the routine anticoagulation alone.

Methods: All 12–85 years old patients with recent (0–8 weeks) DVT were included. In CDT group, thrombus was aspirated mechanically and streptokinase was given along with unfractionated heparin (UFH). After 6 months, deep venous patency and post-thrombotic syndrome (PTS) was assessed by using duplex ultrasound and Villalta scale, respectively.

Results: Among 51 patients with completed data, 25 patients were allocated additional CDT given for a mean duration of 108 +/- 32 hours and 26 patients were allocated standard treatment alone. Grade III (complete) lysis was achieved in 37% and grade II (50%–90%) lysis in 63% of patients. Patients with partial lysis underwent percutaneous transluminal angioplasty and/ or venous stenting. After 6 months, iliofemoral patency was found in 20 (80%) in the CDT group vs. 7 (23%) in anticoagulation alone group ($p < 0.01$). PTS