

VENOUS STENTING FOR SYMPTOMATIC ILIAC THROMBOSIS: FIVE-YEARS EXPERIENCE OF SINGLE CENTER.

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Background and Aims

Despite anticoagulation, up to 50% of the patients develop a severe post-thrombotic syndrome as a consequence of severe ileo-femoral deep vein thrombosis. May-Thurner syndrome (MTS), a rare condition resulting in an anatomic compression of left iliac vein, is often involved in the severity of symptoms. Endovenous stenting is a promising approach used as an additional treatment for venous outflow obstruction in patients with acute or chronic symptoms of ileo-femoral thrombosis.

We aim to describe the outcome of ileo-femoral thrombosis after endovascular approach in a single-center cohort of patients.

Methods

We described patients with ileo-femoral DVT who underwent venous percutaneous angioplasty (PTA) and stenting for symptomatic acute DVT or chronic PTS from August 2020 to February 2025. The following data were collected: sex, age, thrombophilic status, pattern of DVT, timing and type of endovascular procedure, adverse events, anticoagulant therapy and status at last follow-up.

Results

Sixteen patients with severe ileo-femoral DVT referring to our centre, were considered for endovascular approach from August 2020 to February 2025. Nine patients were female and seven were male, with median age at DVT onset of 36 years old (range 25-74).

All patients presented with the left iliac involvement with also inferior cava extension in three cases. CT scan revealed a MTS in all patients except in two cases. A major thrombophilia was detected in three patients (one with protein S deficiency, one with protein S deficiency+heterozygous mutation for factor V Leiden and one with combined mutation of

factor V Leiden/factor II G20210A) while a mild thrombophilia was present in one case; one patient presented with idiopathic erythrocytosis and one woman was taking the estrogenic therapy.

Three patients presented with acute DVT not responding to anticoagulation and the endovascular procedure was performed within 20 days from the onset of the symptoms. Thirteen patients presented with symptomatic PTS, thus the PTA+stenting was performed in chronic phase. CEAP classification was equal to 3 or 4 in nine patients and equal to 6 in four patients. Pain was present in almost all patients. The median time from DVT onset and the procedure was 19 months (range 6-44 months). The procedure consisted in all cases in aspiration of clot using a guide catheter, followed by balloon angioplasty and venous stent placement. Acute stent occlusion occurred in two patients and required a reoperation and placement of a new stent without sequelae. Major bleeding occurred in two patients after two days from procedure, without clinical impairment. All patients were treated with full dose of heparin in the first month followed by a long-term anticoagulant therapy with DOAC.

No PTS syndrome developed in patients treated in acute phase and the symptoms improved in all patients treated in chronic phase, with resolution of pain and reduction of chronic edema. After a median follow-up of 26 months, late restenosis occurred in one patient, while nobody experienced a relapse of DVT.

Conclusions

Severe iliac thrombosis can occur, often favored by MTS that need to be suspected. Conventional anticoagulant therapy is often not enough in these cases and PTS can easily develop with severe symptom. Endovascular approach is a useful therapeutic option with high success rates, in preventing and reducing the severity of the PTS.

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