
CHICAGO, Illinois, September, 2017 – Although the ATTRACT trial (Acute Venous Thrombosis: Thrombus Removal with Adjunctive Catheter-Directed Thrombolysis) suggests most patients will not benefit significantly from more aggressive treatment of deep vein thrombosis (DVT), an upcoming report in the Journal of Vascular Surgery Venous and Lymphatic Disorders highlights the benefits of catheter-directed thrombolysis (CDT).

DVT remains a significant health problem with an annual incidence reported between 1.1 and 1.3 per 1,000. Long-term sequelae include chronic venous insufficiency affecting approximately 2.5 million Americans. Up to 50 percent of these have post-thrombotic syndrome (PTS) and 20 percent develop frank venous ulceration. The impact on the patient’s quality of life is significant, as is the economic impact of the disease. Care for venous ulceration in the United States has been estimated up to $3 billion annually.

While the mainstay of acute DVT treatment is anticoagulation, more aggressive strategies involving lytic therapy (CDT and pharmacomechanical CDT to restore patency and maintain valve function early) may reduce the incidence of PTS. This is thought to be true for those presenting with extensive ilio-femoral DVT. However, the results of the ATTRACT trial, a large multicenter randomized controlled trial presented at the March 2017 meeting of the Society of Interventional Radiology, showed no significant difference in PTS following aggressive treatment versus anticoagulation alone.

Subgroup analysis did reveal lytic therapy resulted in faster resolution of symptoms at 30 days in patients presenting with severe symptoms, and less moderate/severe PTS in those presenting with ilio-femoral DVT.

As reported in JVS:VL, researchers from the Mercy Medical Center in Des Moines, led by vascular surgeon Dr. David Chew, retrospectively evaluated their single center results treating acute femoral-popliteal DVT, 93 percent of which included the iliac veins. The authors compared 89 patients who underwent CDT versus 102 treated with anti-coagulation alone. The CDT was performed using tPA, limited to three days, and adjusted according to fibrinogen levels.

Their primary endpoints, measured at three months, significantly favored CDT over anti-coagulation alone:
- Deep vein patency: 75 percent vs 11 percent
- Post-thrombotic symptoms: 21 percent vs 73 percent
• Valve dysfunction: 23 percent vs 67 percent

Importantly, their protocols resulted in only 6 percent major bleeding follow CDT compared to 15 percent for anti-coagulation, and no significant difference in pulmonary embolism or mortality.

Limitations to this study include: • The two groups differed in age (CDT patients being younger) and increasing age was determined to be a significant risk factor for bleeding
• Post-thrombotic syndrome is a chronic condition which typically occurs years after acute DVT and the improvement of symptoms at three months does not necessarily mean avoidance of PTS (this review is targeted at those patients with acute – less than 45 days – DVT)
• The size of the study is small compared to the larger trials

First author Dr. Mayin Lin notes: "The results of our single-center study suggest that CDT is superior to standard anticoagulation alone in restoring patency to the femoral-popliteal venous segment in lower extremity DVT that was associated with proximal extension. This was achieved without an increased risk of bleeding associated with the use of tPA."

The authors’ protocol limited lysis to three days and relied on measurement of fibrinogen levels to avoid systemic fibrinolysis and bleeding.

Those who treat patients with acute DVT will rely heavily on the extraordinary efforts of those who perform randomized trials such as the ATTRACT trial. However, excellent results achieved in selected patients using refined protocols speak loudly in the ongoing debate of “to lyse or not to lyse.”

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