Quality of Life After Pharmacomechanical Catheter-Directed Thrombolysis of Proximal Deep Venous Thrombosis

In patients with proximal DVT, PCDT resulted in greater improvement in disease-specific QOL than no PCDT, at 1 month and 6 months, but not later.

In patients with iliofemoral DVT, PCDT led to greater improvement in disease-specific QOL during 24 months.
CHICAGO, Ill., Dec. 19, 2020 – An analysis of data from the ATTRACT trial published in the online version of the January Journal of Vascular Surgery: Venous and Lymphatic Disorders (JVSVL) reveals that quality of life (QOL) measures improve after pharmacomechanical catheter-directed thrombolysis (PCDT). This is particularly true early on and for iliofemoral deep venous thrombosis, or DVT.

Patients suffering from DVT face several major issues. Early in the course of the disease, patients experience severe pain and swelling of the limb along with the threat of pulmonary embolism. While anticoagulation is effective in ameliorating these issues, in the long term, up to 50 percent of patients will develop post-thrombotic syndrome (PTS). This syndrome is associated with a significant reduction in quality of life, both general and disease-specific.

The ATTRACT (Acute Venous Thrombosis: Thrombus Removal with Adjunctive Catheter-Directed Thrombolysis) trial investigators sought to determine the value of PCDT in treating proximal DVT. Although the trial did not show a significant decrease in the syndrome at two years following treatment, it did observe a reduction in its severity and an accelerated resolution of acute symptoms.

The ATTRACT trial was coordinated by research groups at Washington University (St. Louis), McMaster University (Hamilton, Ontario), Massachusetts General Hospital (Boston) and the Mid America Heart Institute (Kansas City, Mo). Patients were enrolled and managed in 56 U.S.-based hospitals. Susan Kahn, M.D., of Jewish General Hospital in Montreal led the investigators.

A total of 692 patients were evaluated between 2009 and 2014 with follow-up at one, six, 12, 18 and 24 months. Randomization resulted in 337 allocated to PCDT and 355 to no PCDT. General patient demographics showed a patient population that was a mean age of 53, 62 percent male and 57 percent iliofemoral versus 43 percent femoral-popliteal DVT.

For the group as a whole, VEINES (VEnous INsufficiency Epidemiological and Economic Study)-QOL scores for those undergoing PCDT versus no PCDT showed significant improvement at one and six months (difference 5.7, 5.1 points, respectively), but no difference at the later time intervals.

The investigators provided sub-group analysis, separating the iliofemoral from femoral-popliteal DVT.

For iliofemoral DVT, VEINES-QOL scores were improved significantly for those undergoing PCDT versus no PCDT at each time point:

- 10-point difference at one month
- 8.8 points at six months
- 5.8 points at 18 months
- 5.6 points at 24 months

In contrast, for femoral-popliteal DVT, there was no difference in the quality of life score between the treatment groups at any time point.

Why might PCDT have improved venous quality of life, even though it did not prevent post-thrombotic syndrome?

Dr. Kahn noted, “First, most of the improvement in QOL was in the first six months, and the trial did find that PCDT reduced clot burden and early leg pain and swelling over no PCDT, and was associated with a reduced point prevalence of PTS at six months, but not thereafter. Though PCDT did not prevent PTS, it did reduce its severity.”

The decision to proceed with lytic therapy for patients with iliofemoral DVT can be complicated. This data supports offering this therapy to selected patients with severe symptoms, low bleeding risk and a willingness to undergo a catheter-based procedure.

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