

Early Results of the Trellis-8 Catheter in the Treatment of Deep Vein Thrombosis

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Purpose

The purpose of this study was to evaluate the safety and efficacy of the modified Trellis-8 (Bacchus Vascular, Santa Clara, CA) catheter in the treatment of lower extremity deep vein thrombosis (DVT).

Methods

Between February and April 2005, 28 patients from 12 institutions were treated using the modified Trellis-8 catheter. All patients were captured prospectively and retrospectively reviewed. Following each procedure the physicians ranked 11 device attributes (341 potential ratings) as well as safety and efficacy of the device in removing thrombus in patients with deep vein thrombosis.

Results

Mean age was 49.9 ± 18 years (range 30 to 78 years). Of the 28 patients treated 10 (36%) had acute DVT, 12 (43%) had acute on chronic, 2 (7%) had subacute on chronic, and 4 (14%) had chronic DVT. Single-setting treatment was achieved in 24 of 28 patients (86%) with an overall procedural success in 22 patients (79%) with a mean total procedure time of 115 minutes (range 55 to 240 minutes). TPA (mean dose 3.7 mg, range 1 to 6 mg) was used in 15, TNK in 6 (mean dose 3.5 mg, range 2 to 5) and urokinase (mean dose 225,000 units, range 100,000 to 300,000) in 6 patients. In 90% (9 of 10) of acute cases, removal of thrombus was greater than 70%. In patients with a prior history of DVT only 50% (9 of 18) had greater than 70% of thrombus removed ($p < .05$). Adjunctive procedures (PTA/stenting, thrombolytics) were required in 22% (4 of 18) to achieve procedural success in patients with any history of prior DVT. Overall procedural success was 90% (9 of 10) in those with an acute DVT compared with 72% (13 of 18) for those with a prior history of DVT. There were no adverse events in any of the patients treated.

Conclusion

The Trellis-8 catheter was safe and effective in treating deep vein thrombosis. However, specific clinical results varied reflecting thrombus chronicity. Patients with acute DVT were less likely to require adjuvant procedures, had a higher procedural success rate, and had a significantly higher incidence of complete thrombus removal.