

Role of Individual Venous Symptoms and Signs at Baseline in Predicting Future Development of Post-thrombotic Syndrome: Sub-analysis of the ATTRACT Trial

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Background: The post-thrombotic syndrome (PTS) occurs in 30-40% of patients following deep vein thrombosis (DVT). The Villalta Scale score at baseline (total score, maximum 33, based on severity of 5 venous symptoms [maximum score 15] and 6 signs [maximum score 18]) has been shown to predict development of PTS.

Aims: To describe the prevalence of individual venous symptoms and signs components of the Villalta Scale at baseline, and to assess if these predict the development of PTS in participants of the ATTRACT trial, which evaluated pharmacomechanical catheter-directed thrombolysis plus anticoagulation vs. anticoagulation alone to treat proximal DVT that extended above the popliteal vein.

Methods: Using the ATTRACT Trial database, we calculated the prevalence of individual components of the Villalta Scale at baseline and used logistic regression to assess if they predicted development of PTS, defined by a Villalta score ≥ 5 from 6-24 months after enrolment.

Results: Among 691 study participants, mean (SD) Villalta total score at baseline was 9.7 (5.4). In univariate analysis, all 5 symptoms similarly predicted development of PTS (ORs ranged from 1.5 to 2.0 per unit increment in score, p values ≤ 0.0003). Among 6 signs, only hyperpigmentation (OR = 2.09 [95% CI: 1.42 to 3.06]), venous ectasia (OR = 2.00 [1.50 to 2.67]) and pretibial edema (OR = 1.96 [1.28 to 3.01]) were predictive of PTS. In multivariate analysis, total Villalta symptoms score and total Villalta signs score similarly predicted risk of developing PTS (OR = 1.07 [1.01 to 1.13] and 1.11 [1.04 to 1.18] per unit increment in score, respectively).

Conclusions: Several individual symptoms and signs predicted development of PTS. In multivariable analysis, total symptoms score and total signs score were similarly predictive of risk of developing PTS, suggesting that either alone could be used when assessing future risk of PTS.

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