

Clinical predictors of adverse outcome in VTE outpatients – the VERITY PUSH study

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There are few clinical, demographic or laboratory factors that are used to predict VTE recurrence in clinical practice, especially in the outpatient setting. Stratifying for risk of adverse outcome would affect duration of anticoagulant therapy and monitoring of patient status. We determined the incidence of adverse outcome (recurrence, bleed and death) and attempted to define clinical risk factors for VTE recurrence and adverse outcome in the PUSH study (Prospective Follow-Up Survey in Verity Hospitals).

Between November 2008 and April 2009, seven hospitals enrolled 843 consecutive patients with objectively proven VTE who were seen at outpatient DVT clinics; patients were followed for up to 388 days. In total, 221 patients were excluded (75 patients had no follow-up entry; in 50 cases it was unclear if the patient had been treated as an outpatient; 96 cases were not treated as outpatients). The recurrence rate in 622 patients was 5.5%; 2.6% of patients experienced a bleeding event (1.5% minor and 1.2% major) and overall mortality was 5.8%. Univariate logistic regression showed that recurrence was related to younger age (<50 years, $p=0.041$) but to none of the 12 other parameters assessed. Cancer ($p<0.001$) and a diagnosis of cancer subsequent to VTE ($p=0.037$) were predictive of an adverse event; multivariate logistic regression confirmed these factors were independent predictors of adverse outcome with high odds ratios (OR 4.3, 95% CI 2.4–7.5; OR 4.3, 95% CI 1.2–15, respectively). Restricting the analysis to non-cancer outpatients, univariate logistic regression again identified age <50 years ($p=0.033$) as an independent risk factor for VTE recurrence and new cancer diagnosis ($p=0.007$) as a predictor of adverse outcome.

From the perspective of routine outpatient treatment of VTE, these results identify cancer as an overriding risk for adverse outcome and identify younger age (<50 years) as an independent risk factor for recurrence.