

論 文 要 旨

A new pre-test probability score for diagnosis of deep vein
thrombosis in patients before surgery

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Abstract

Background: Venous thromboembolism is a serious perioperative complication. We developed a new pre-test probability score for predicting deep vein thrombosis (DVT) before surgery.

Methods: Whole leg ultrasonography was performed on 973 inpatients and outpatients with suspected DVT based on a preoperative D-dimer cut-off value of ≥ 1 $\mu\text{g}/\text{ml}$. We allocated two-thirds ($n=651$) of the study participants to a derivation cohort and one-third ($n=322$) to a validation cohort. The pre-test probability model was developed from the derivation cohort data.

Results: The pre-test probability model for DVT assigned 2 points to D-dimer ≥ 1.5 $\mu\text{g}/\text{mL}$ and 1 point each to age ≥ 60 years, female sex, ongoing glucocorticoid therapy, prolonged immobility, and cancer with high risk of DVT. The area under the curve of the pre-test probability score was 0.72 and 0.70 in the derivation and validation cohorts, respectively. The rates of DVT according to pre-test probability scores in the derivation and validation cohorts were 7% and 6% in the low (score =0-2), 23% and 22% in the intermediate (score =3-4), and 47% and 50% in the high probability group (score ≥ 5), respectively ($P<0.0001$).

Conclusions: The pre-test probability score (Kagoshima-DVT score) was helpful in detecting preoperative DVT in both inpatients and outpatients. We identified low probability group to reduce

whole-leg ultrasonography and high probability group to detect more DVT before surgery.