

## Patient blood management, seuil transfusionnel

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### Does perioperative blood transfusion increase the risk of venous thromboembolism after radical cystectomy?

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#### Position du problème et objectif(s) de l'étude:

Radical cystectomy (RC) is associated with significant morbidity including perioperative bloodtransfusion. The aim of this study was to develop a model that would provide information on the relationship between perioperative blood transfusion and the development of venousthromboembolism (VTE) after RC.

#### Matériel et méthodes:

All patients who underwent open RC between between january 2006 and december 2021 at our institution were reviewed retrospectively. Patient with a history of prior VTE, those taking anticoagulation prior to surgery, patients with metastatic bladder cancer or with missing data were excluded. A venous thromboembolism was defined as either a deep venous thrombosis or pulmonary embolism. Patients who developed a VTE within 90 days after surgery were compared to those who did not. Logistic regression was performed to assess the association between covariates and the probability of VTE within 90 days after surgery.

#### Résultats & Discussion:

A total of 372 cases were enrolled in this study. Almost 224 patients received a perioperative blood transfusion, with a median of 1 (IQR: 0-4) unit transfused. Forty-two patients of whom developed a VTE within 90 days after surgery. There was no significant difference in age, sex, race, Charlson score, clinical stay, BMI. Patient who developed a VTE experienced a longer mean operative time (367.84 vs 311.5 minutes,  $p=0.01$ ), had adverse pathology ( $\geq pT3$  or node positive) ( $p=0.005$ ) and received a greater mean number of transfused units of blood during their stay (2.42 vs 1.26,  $p=0.02$ ). On multivariable logistic regression, each unit of transfused blood given during a patient's hospital stay was significantly associated with development of VTE (OR 1.22, 95% CI 1.12-1.44), as was operative time (OR 1.47, 95% CI 1.16-1.88).

#### Conclusion:

The incidence of perioperative blood transfusion is significant at the time of radical cystectomy. This study demonstrates that blood transfusion was associated with an increased risk for developing the VTE.

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