

Balancing risk of haematoma and venous thrombosis in VTE prophylaxis for breast cancer surgery A Meta-Analysis and Systematic Review

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Abstract

Introduction Venous thromboembolism (VTE) is a largely preventable cause of morbidity and mortality in post-operative patients. Guidelines for VTE prophylaxis in breast cancer surgery are not well-established. **Methods:** A comprehensive search was undertaken of all studies that described the role of VTE prophylaxis in breast cancer surgery. Comparative studies that reported on postoperative outcomes between patients who received VTE prophylaxis (prophylaxis) and those who did not (no prophylaxis) were included in the analysis. A meta-analysis using random-effects model was used to analyze key outcomes, with data presented as odds ratio (OR). **Results:** A total of 2470 patients from 6 studies were included in this study. Of these patient, 60.9% (n : 1504) received prophylaxis. The haematoma rate in this study is 0.05% (n : 133). The incidence of haematoma was significantly associated with the use of prophylaxis (6.85% *versus* 3.11%, p : 0.001). Surgical intervention for haematomas was also significantly associated in this group (3.15% *versus* 0.83%, p : 0.004). However there was no difference in VTE events between both groups (0.26% *versus* 0.36%, p : 0.88). **conclusion:** The use of VTE prophylaxis in breast cancer surgery is associated with increased haematomas without any benefit in preventing venous thromboembolic events. Further studies that examine the use of risk assessment tools for VTE prophylaxis in high risk patients may be beneficial.

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