

Incidence of venous thromboembolism (VTE) following bariatric surgery in a Bariatric Center of Excellence in Hamilton (BCoE), Ontario

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Objective: To determine the incidence of postoperative VTE at 3 months in bariatric surgical patients in a BCoE in Hamilton, Ontario

Background: Bariatric surgical patients are at moderate risk of developing VTE. VTE rates reported in the literature varied from 0.3 to % 1.9%¹ with most events happening following hospital discharge^{2,3}.

Methods: Prospective observational study, data collected from the Ontario Bariatric Registry on 2469 patients who underwent bariatric surgery at our Institution from January 2010 to January of 2017. VTE prophylaxis consisted of 5000 IU of unfractionated (UF) heparin subcutaneous on call to the operating room and the night of the surgery, intraoperative pneumatic compression boots, early mobilization program and single daily injection of tinzaparin (weight based) starting on day 1 after surgery and extended for 7-10 days following discharge. For patients at highest risk of VTE (prior VTE) prophylaxis was extended to 30 days.

Results: Most patients were females (82%), mean BMI 49 kg/m², mean age 46 years; prior VTE diagnosis 2.4%. Most common procedure was gastric bypass (69%) followed by sleeve gastrectomy (28%), DS (0.6%) and conversion/repair (2%). The overall risk of VTE at 3 months was 0.1% which is lower than data from USA registries and one of the lowest of Ontario Centers.

Conclusions: Incidence of VTE following bariatric surgery at our institution is low and lower to rates reported from US registries. We postulate that our low incidence of VTE at 3 months is due to an aggressive VTE prophylaxis regime. More research is needed to identify those patients at a highest risk of VTE, clinical predictors and/or risk assessment tools to guide thromboprophylaxis.

Keywords: bariatric surgery, deep vein thrombosis, pulmonary embolism, thromboprophylaxis, gastric bypass, gastric sleeve

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