Low Molecular Weight Heparin versus Rivaroxaban for Thromboprophylaxis in Body Contouring Procedures

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PURPOSE

This study compares the use of low molecular weight heparin and Rivaroxaban for postoperative thromboprophylaxis in body contouring plastic surgery procedures.

METHODS

We performed a retrospective, single center chart review of 1005 patients who underwent body contouring plastic surgery procedures between January 2012 to February 2014. All procedures were performed under general anesthesia in the same surgical outpatient center, by five surgeons. All patients received post-operative thromboprophylaxis. 302 patients (30%) received low molecular weight heparin and 703 patients (70%) received Rivaroxaban. Patient age, sex, height, BMI, smoking status, oral contraceptive or hormone replacement therapy use were recorded. The type, number, and duration of the procedures were recorded. The relative risk score as described by Caprini was evaluated for comparison. Major complications associated with thromboprophylaxis were reviewed including hematomas requiring surgical evacuation, acute blood loss anemia requiring transfusions, and thrombotic or hemorrhagic events.

RESULTS

The average age of patients receiving low molecular weight heparin was 41 years old and 40 years old for Rivaroxaban. 95% and 90% of patients were female taking low molecular weight heparin or Rivaroxaban, respectively. The average patient BMI was 26.9 kg/m^2 on low molecular weight heparin and 27.5 kg/m^2 on Rivaroxaban. The calculated average Caprini scores for low weight molecular heparin and Rivaroxaban were both 5, respectively (p=2.97E-06). The overall incidence of drug related adverse events related complications occurred in 0.99% of patients who received low molecular weight heparin and 1.85% who received Rivaroxaban. The complications encountered by the 302 patients on low molecular weight heparin consisted of 2 patients (0.6%) with hematomas and 1 patient (0.3%) with decreased hemoglobin requiring tranfusions. The complications encountered by 703 patients on with Rivaroxaban consisted of 9 patients (1.3%) with hematomas, 3 patients (0.4%) with decreased hemoglobin requiring transfusions, and 1 patient (0.1%) with a DVT and PE. There were no cases of hemorrhagic events.

CONCLUSION

Rivaroxaban is comparable to low molecular weight heparin for thromboprophylaxis after body contouring procedures with similar rates of drug related complications. Factors such as cost, medication administration, compliance, and availability may be taken in to account in medication selection. Further investigation is warranted with more clinical cases in order to recommend the use of this medication for routine postoperative thromboprophylaxis after body contouring procedures.