

Incidence of Venous Thromboembolism and Hematoma Following Placement of Inflatable Penile Prosthetic: Safety of Perioperative Subcutaneous Heparin

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Background/Objective: Patients undergoing inflatable penile prosthetic (IPP) surgery are at an increased risk for cardiovascular complications such as venous thromboembolism (VTE) following surgery due to pre-existing comorbidities associated with erectile dysfunction. The use of perioperative subcutaneous heparin (SqH) along with a surgical drain has been shown to be effective in preventing VTE in IPP patients, without increasing hematoma formation. Not all prosthetic surgeons utilize surgical drains postoperatively. In this study we aim to assess the safety and efficacy of perioperative SqH in preventing VTE in IPP patients without the use of a surgical drain.

Methods: This was a retrospective review from January 2021-July 2023 of patients who underwent IPP placement or explant and replacement at a single institution. Patient demographics, comorbidities, Caprini risk factor scores, VTE risk factors, and 90-day post-operative complications, including hematoma formation, were reviewed. Statistical analyses were performed comparing these variables in men who received SqH and those who did not.

Results: We reviewed data for 240 patients; 53% (n=127) received perioperative SqH. The incidence of VTE was 0.9% (1/113) in the non-SqH group, and no VTE was recorded in the group receiving SqH. There was no statistical significance in hematoma formation between groups (SqH 5.5% vs. non-SqH 6.2% p=.898). Beyond hypertension prevalence (SqH 74.8% vs. non-SqH 62.8% p=.045), there was no difference between comorbidities or Caprini risk factor scores (SqH 6.79 vs. non-SqH 6.82 p=.474) between groups (Table 1). 94% of the patients in this study were considered high risk for VTE.

Conclusions: Perioperative SqH use without placement of a surgical drain was found to be safe and effective in preventing VTE in patients undergoing IPP surgery. There was no increased risk of hematoma formation or post-operative complications between the groups. Perioperative SqH should be considered in all patients undergoing IPP surgery.

Table 1 – Comorbidity Analysis

	Heparin (n=127)	No Heparin (n=113)	P-value
Diabetes (%)	44.1	38.1	0.343
BMI	30.1	31.2	0.078
HTN (%)	74.8	62.8	0.045
Peripheral/Central Vasc. Disease (%)	22	30.1	0.155
Average Caprini Score	6.79	6.82	0.474
Immunosuppressed (%)	3.1	4.4	0.604
Smoker (%)	30.7	34.5	0.530
History of Malignancy (%)	40.9	45.1	0.513
COPD (%)	4.7	10.6	0.084
History of MI (%)	3.1	2.7	0.820
CVA/TIA (%)	10.2	5.3	0.158
HLD (%)	63.0	54.0	0.157
CHF (%)	7.9	12.4	0.244
Average Operative Time (min)	78.1	85.9	0.032
VTE Incidence (%)	0	0.9	0.288
Hematoma Incidence (%)	5.51%	6.19%	0.898