

Efficacy and safety of low molecular weight heparin and mechanical thromboprophylaxis in immediate implant-based breast reconstruction: A retrospective comparative analysis

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Introduction:

- **Cancer** increases the risk of **venous thromboembolic events (VTE)**
- **Postoperative** period requires particular caution
- Limited research on **pharmacological thromboprophylaxis** in the context of **mastectomy with immediate implant base BR**
- We aim to evaluate the **rate of VTE** and pharmacological thromboprophylaxis related **complications**

Methods :

- **Retrospective** chart review (January 2021 to December 2023)
- Patients underwent **mastectomy** followed by **immediate implant-based BR**
- **Exclusion** : **other surgical techniques** ; active **metastatic disease** ; **incomplete treatment data** or **medical record**
- **Silicone** prosthesis wrapped in **Vicryl mesh**
- **IPC** on both shins **for all patients** right after the operation
- Pharmacological thromboprophylaxis : 6h postoperation
 - 40mg/day of LMWH according to each **patient's thromboembolic risk** (Caprini score, clinical exam, liquid amount and aspect in drain)
 - until discharge

Results :

- **179 patients included** (211 breasts)
- **133 patients (74.3%) had IPC and LMWH**
- **46 patients (25,7%) had IPC only**
- **No statistical difference** between groups for :
 - mean **age**
 - mean **BMI**
 - number of active **smokers**
 - mean **ASA** and **Caprini** scores

	LMWH	No LMWH	p-value
	n = 133	n = 46	
Surgical Indication			
<i>Breast cancer</i>	132 (99.2%)	45 (97.8%)	1.000
<i>Prophylactic mastectomy</i>	1 (0.8%)	1 (2.2%)	1.000
Operative characteristics			
<i>unilateral, n (%)</i>	115 (86.5%)	32 (69.6%)	0.014
<i>bilateral, n (%)</i>	18 (13.5%)	14 (30.4%)	0.014
Type of operation			
<i>SSM</i>	73 (54.9%)	20 (43.5%)	0.182
<i>NSM</i>	60 (45.1%)	26 (56.5%)	0.182
Mean resection weight per breast [grams], (SD)	415.3 (254.2)	358.2 (227.7)	0.128
Mean operative time [minutes], (SD)	191.8 (53.1)	198.5 (65.4)	0.490

Figure 1. Operation characteristics

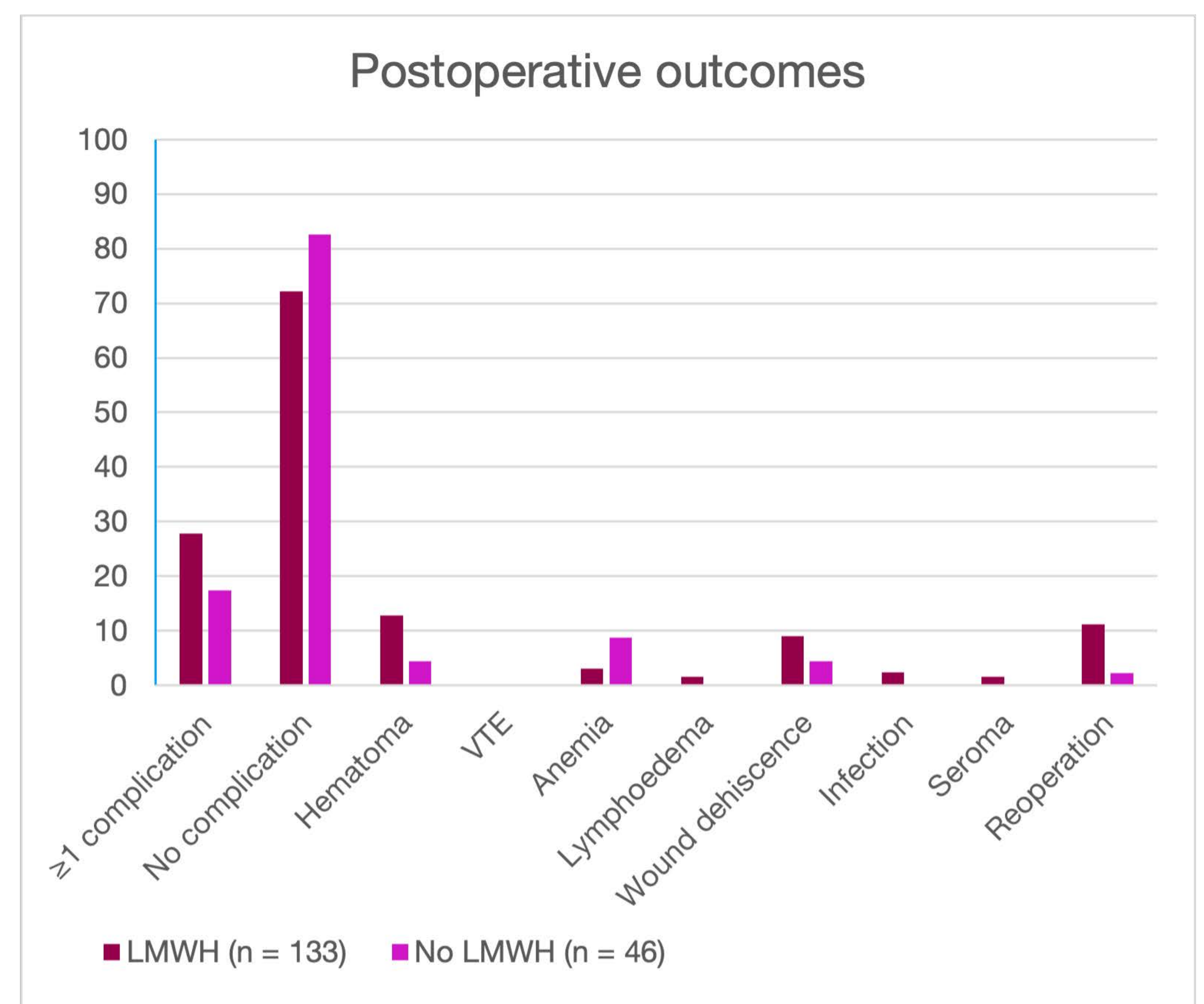


Figure 2. Postoperative outcomes comparison (%)

Conclusion :

- no significant differences in complication rate,
- no VTE events in both groups

Choice of LMWH use should be mostly based on the VTE risk following mastectomy and IBR, given that there no significant increases in bleeding or hematoma rates in patients with LMWH.