



# The Assessment of Thromboembolism Risk in Postbariatric Patient: Our Experience in 936 Patients

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## BACKGROUND

Thromboembolism is a postoperative complication that ought to be avoided because of its high risk of mortality. Thromboembolism prevention guidelines are subject to the outcome of yearly international consensus conferences.<sup>1</sup> In the field of plastic surgery, the patients at increased risk of pulmonary thromboembolism or deep vein thrombosis (DVT) are the patients who are most debilitated (burned), patients subjected to long periods of bed rest, and those undergoing postbariatric surgery.<sup>2,3</sup>

## METHODS

Between 2005 and 2015, among 22,765 who had undergone “major” plastic surgery, 936 patients with weight loss (4.1%) had been subjected to postbariatric surgery with general anesthesia lasting for more than 1 hour. All patients had undergone thromboembolic prophylaxis with low molecular weight heparin and other preventive measures such as elastic compression and progressive and early mobilization postoperatively, especially when they were expected to have more than 3 days of bed rest.

## RESULTS

Nineteen of 22,765 (0.083%) patients developed thromboembolic phenomena; among the patients who had taken preventive measures, 8 of 19 had been subjected to postbariatric surgery. Thirteen of 19 patients showed complications after discharge (Fig. 1A). According to data analysis and based on a large number of clinical cases (Fig. 1B), we estimated that the risk of thromboembolic complications is >10 times higher in patients undergoing postbariatric surgery than in high-risk patients undergoing a major surgery with general anesthesia lasting for more than 1 hour.

## CONCLUSIONS

The routine use of low molecular weight heparin, the use of elastic compression intraoperatively and postoperatively, and early mobilization associated with physiotherapy have allowed us to minimize the occurrence of DVT and pulmonary thromboembolism during hospitalization, according to data from international literature.<sup>4,5</sup> Obese patients with weight loss need a specific treatment approach and preoperative preparation, which includes paying attention to risk factors<sup>2,6</sup> associated with thromboembolism, namely, male sex, age >60 years, smoking, previous history of DVT, and history of chronic inflammatory diseases/thrombophilia or neoplastic disease.<sup>7,8</sup> We need to stratify the risk for each patient, and for those patients with more predisposing factors, we need to pay close attention to the duration of prophylaxis and hospitalization, following updated international guidelines.

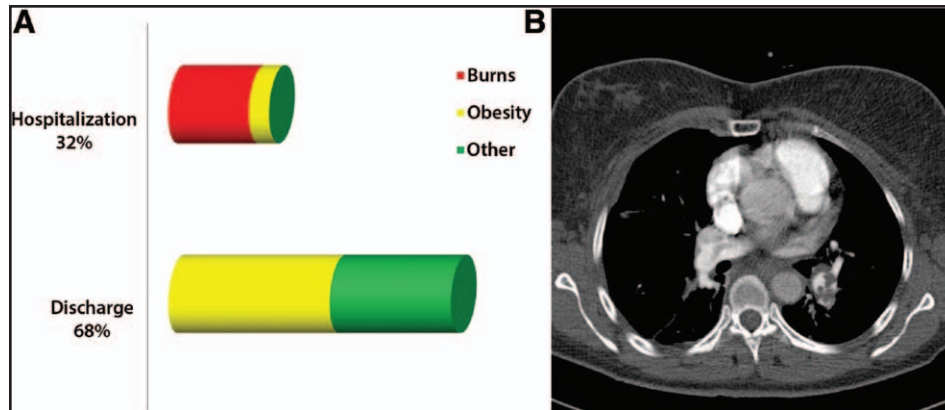
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**Fig. 1.** A, This diagram illustrates that the majority of cases occurred after discharge, particularly in 8 patients discharged after postbariatric surgery. B, Computed tomography angiography shows severe bilateral pulmonary thrombosis of a patient who underwent (4-hour general anesthesia) combined postbariatric surgery (breast and lower-limb lift).

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