

# Perspective on Plastic Surgery Infirmary Patients

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## Perspective

Venous Thromboembolism (VTE) is a serious public health reality and a threat to the safety of plastic surgery patients. It is frightening because even though it is estimated that half of all surgery-associated DVT will resolve themselves spontaneously (generally within 3 days 1), they can strike quickly and be fatal. A study revealed that among patients who presented symptomatic Pulmonary Embolism (PE), 10% would die within 60 minutes and 5% of patients with PE developed cardiac dysfunction [1]. The exact incidence of VTE in the plastic surgery population is unknown, but there is relevant data indicating its prevalence, with a significantly large study by Grazer and de Jong that isolated PE as the single largest cause of mortality in patients receiving liposuction. Another study, by Bucknor and Egeler, verified that PE was the main cause of death in over one million office-based plastic surgery patients, and that event was most commonly associated with abdominoplasty. For instance, cases number 2 and 6 had modifiable risk factors that were not addressed before surgery, in cases 4 and 5, the prophylaxis was done with 20 mg LMWH, the incorrect dosage [2].

In cases 7, 8 and 9 (Head and Neck Oncological surgical patients), all with Caprini score of 3 or above, LMWH should have been considered. This is a recommendation rated as Grade B evidence by the ASPS guidelines, meaning that, 'Clinicians should follow a recommendation but should remain alert to new information and sensitive to patient preferences'. And even though physician judgment determines the final care received by the patient, if the decision is not done accordingly to international recommendations, then there must be a reasonable rationale to that decision in clinical records. A possible explanation to this data, namely lack of attention to VTE prevention by plastic surgeons, may be that these are mainly focused on the surgery; the patient is the surgery, which has steps and techniques to follow [3]. And might sometimes disregard or neglect other aspects of operative care, such as preoperative antibiotic prophylaxis, the patient's diseases, medication, etc. Maybe some expect the anaesthesiologist will cover those items. However, often that is not the case and the patient is the plastic surgeons' responsibility, that must be cared as a whole; if it does have diabetes, is it under control? Hypertension is under control or it is necessary medication adjustment? In addition, patients are often seen by different specialists or residents in major hospitals, which is a quite different from private practice [4]. In fact, abdominoplasty consistently presented the highest published rates of DVT and PE in plastic surgery- Van Uchelen et al reported a 1.4% incidence, and Grazer and Goldwyn showed a 1.2% incidence of DVT and 0.8% of PE.

With this in mind in 2009, The American Society of Plastic Surgeons (ASPS) convened a Venous Thromboembolism Task Force and published its official guidelines in 2012. Recently, the American Association of Plastic Surgeons performed a systematic review and meta-analysis of venous thromboembolism

risk stratification and the risks and benefits of chemoprophylaxis specific to the plastic surgery population. They recommended to assess the risk of VTE to all surgical patients and recorded it in the clinical process. The 2005 Caprini Risk Factor Thrombosis score has been the most widely used and well-validated individualized risk-stratification tool, and is endorsed by both the American Society of Plastic Surgeons and the American Association of Plastic Surgeons for use, even though it presents its own limitations [5].

Taking in consideration the VTE risks (Caprini score, the procedure itself and clinical judgment) two relevant decisions should be pondered: delay surgery so that risk can be reduced (stopping medication, lower body weight, hematologic consultation) and use measures to actively prevent (Chemoprophylaxis). Regarding active prevention, mechanical devices are generally safe, little harm can be made with their use, and its application is recommended whenever possible, being sequential compression devices preferred over elastic compression stockings. Chemoprophylaxis on the other hand may increase bleeding.

In most cases the chemoprophylaxis should be done with low molecular weight heparin (LMWH) 40 mg and started 6-12 hours after surgery. Despite many studies demonstrating the importance of VTE, that prevention is the most effective strategy to minimizing morbidity and mortality and that chemoprophylaxis is benefit, plastic surgeons continue to devalue this topic and underuse chemoprophylaxis. The objective of this work is to find information that can help to clarify the importance of VTE in plastic surgery and if the recommended means of prevention are being employed.

## References

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