
Letter to the Editor

Comparative study on protocols for prophylaxis of deep venous thrombosis: a new proposal

Dear Dr. Ricardo Baroudi,
Chief Editor of the Brazilian Journal of Plastic Surgery

It was with great surprise that I read the article entitled “Comparative study on protocols for prophylaxis of deep venous thrombosis: a new proposal” by Moulim JL and co-authors, published in the Brazilian Journal of Plastic Surgery, 2010;25(3):415-221¹. The authors quoted a protocol for deep vein thrombosis (DVT) prophylaxis published by Sandri (2005) without mentioning our article (2003), which detailed the first DVT prophylaxis protocol with specific risk factors for plastic surgery².

The DVT prophylaxis protocol we developed was initially presented as a free theme at the annual Congress of the American Society for Plastic Surgery (ASAPS; April 27-May 3, 2002, Las Vegas, United States³). Our protocol was also presented at the Jornada Paulista 2002, an official event of the Brazilian Society of Plastic Surgery, and was later published in 2003². In 2005, we presented a prospective study of 408 patients who underwent cosmetic surgery testing using this prophylaxis protocol at the ASAPS annual conference in New Orleans, United States, where it was awarded the “Best Scientific Exhibit” prize⁴.

There are two possible reasons why Dr. Moulim and co-authors did not quote our article. The first would be that they did not find our article relevant; this possibility, in addition to the fact that there is a limitation to the number of citations per article, could have prompted the authors to omit our article from their reference list. The second possibility is that there was a failure in their literature review.

Moulin et al. (2010)¹ compared two DVT prophylaxis protocols, which they named with the eponyms “Sandri” and “Davison-Caprini.” Both are systems of risk stratification based on percentages obtained for the qualification and quantification of factors known to predispose patients to thromboembolism.

Sandri’s protocol, published in a book chapter (2005), addressed the risk factors for DVT and presented the protocol described by us, with only minor modifications. However, the specific changes were not justified.

In 1991, Caprini et al.⁵ reported for the first time a protocol for DVT prophylaxis in surgical patients based on two groups of risk factors: intrinsic factors, which are related to the clinical aspects of the patient, and the risks resulting from the surgical procedure. Risk stratification was based on the sum of scores for each risk factor. This protocol does not relate any specific factor to plastic surgery. The authors have modified and improved the protocol several times⁵.

In a 2004 review on DVT and plastic surgery, Davison quoted the protocol by Caprini et al. (2001) and added a single factor “the microsurgical flap” to the risk factor list. Davison defined this factor as corresponding to three points, without presenting any scientific basis to support this inclusion. It seems improper and unfair to associate the name Davison with this protocol.

According to the “Davison-Caprini” protocol, there are four risk level categories: low, moderate, high, and very high, while the “Sandri” protocol has 3: low, moderate, and high. The author analyzes the use of the two protocols in 212 patients and concluded that patients undergoing cosmetic surgery have a very high score according to the “Sandri” protocol. According to this result, the percentage indicating anticoagulant medication was 70.28% (corresponding to moderate and high levels). However, according to the Davison-Caprini protocol, the same patients had a score of 9.9%; therefore, these patients did not need pharmacologic intervention, since anticoagulants were used only for very high risk cases.

To circumvent this undesirable result, Moulim et al. (2010)¹ propose a modification of the risk classification to create a new level, super-high-risk, and suggest that anticoagulant treatment be indicated only for this level. However, the article by Geerts et al. (2004)⁶, quoted by Moulim on page 341S, clarifies the difficulty in assessing the sum of individual risk factors, given the fact that it is not known how they interact, and that the simple sum of factors may not justify the achieved risk level.

This is the main reason for the decline in adherence to protocols among surgeons. Decisions based on computing the weighted sum of risk factors may indicate an obligation to use anticoagulants, although it may still be useful to pay more attention to aesthetic plastic surgery.

In 2005, our assessment of the prophylaxis protocol led us to suggest that it was not mandatory to use anticoagulants.

We mentioned the lack of studies in aesthetic plastic surgery demonstrating the importance of non-pharmacological measures such as the use of elastic stockings, intermittent pneumatic compression, and early mobilization of patients under moderate and high risk. In this series of patients, the only case of postoperative hematoma occurred in a patient undergoing anticoagulant treatment, which highlights the need to test this or any protocol in a larger cohort of patients. We ourselves consider our sampling of 408 patients as insufficient to draw conclusions.

We argue that critical reading of the mentioned articles, including our own published work, would foster a better comprehension of the intellectual processes described by Moulim and co-authors, contributing to a productive scientific debate on this subject.

It is possible that the authors did not reference our protocol because of a poor review of the literature. Omitting a pioneering article and publishing another with the same theme in the same journal show a lack of regard for the value of the articles published by this journal.

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