

Are Caprini Scores and Chemoprophylaxis Necessary to Reduce the Risk of Venous Thromboembolism after Abdominoplasty?

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Sir:

Zhang et al¹ state that plastic surgeons must assess venous thromboembolism (VTE) risk by recording predisposing conditions and lifestyle factors. Interestingly, Pannucci et al² recently reported that 80% of women who develop VTE after breast augmentation are likely to have Caprini scores less than or equal to 6. Keyes et al³ found that 89% of affected abdominoplasty patients had Caprini scores of 6 or less. These findings suggest there is no predictive value in obtaining Caprini scores in these patients.

The authors agree with the consensus panel of the American Association of Plastic Surgeons⁴ in stating, “there is no all-encompassing recommendation regarding VTE chemoprophylaxis based on Caprini stratification and surgeons should use clinical judgment when evaluating patients for VTE management.”¹ However, the authors go on to say that abdominoplasty is an exception and that studies have shown a benefit in using VTE chemoprophylaxis in abdominoplasty patients. Four references are cited. In fact, none of these references provides evidence of a reduced VTE risk using chemoprophylaxis in abdominoplasty patients (as opposed to belt lipectomies),⁵ and none recommends this intervention.

Zhang et al¹ do not reference any articles that challenge the value of Caprini scores or the efficacy of chemoprophylaxis.^{6–9} Contradictory evidence cannot be ignored. In 2020, this author published a 5-year prospective study of 1000 plastic surgery outpatients that included ultrasound surveillance.⁸ Notably, although age, abdominoplasty, number of procedures, and operating time correlated significantly with the risk of deep venous thromboses, only age persisted as an independent risk factor on regression analysis.⁸

Compliance is an issue. Some plastic surgeons prescribe anticoagulation to all their abdominoplasty patients solely to reduce medicolegal liability.¹⁰ A reluctance to embrace Caprini scores is not misplaced.⁷ Caprini scores were not developed scientifically, and there is no significant correlation between Caprini scores and relative risk

values.⁷ The VTE Prevention study did not actually find a significant risk reduction using enoxaparin in patients with Caprini scores of 7 or more,¹¹ and such a benefit has not been reported in any published study of plastic surgery patients.⁹

There is a serious medicolegal consideration. Some advocates of risk stratification and chemoprophylaxis are willing to act as plaintiffs’ experts and testify against plastic surgeons who do not conform with guidelines.⁶ Doing so creates a powerful conflict of interest.

It is time to admit that our efforts to identify affected patients have not been successful. Therefore, plastic surgeons should concentrate on measures that are known to be helpful, including avoidance of muscle paralysis during surgery.⁸ Abdominoplasty can be done without muscle paralysis, under total intravenous anesthesia.⁸ Patients treated without muscle paralysis experience very low rates of VTE.⁶

Doppler ultrasound is the only reliable way to diagnose deep venous thromboses.⁸ Deep venous thromboses may be detected early, while they are still small and distal, and before they propagate. Ultrasound technology is approved by the Food and Drug Administration; chemoprophylaxis in plastic surgery patients is not (it is an off-label use). There is clearly interest in the community. A YouTube video of ultrasound screening for VTE in the office now has more than 200,000 views.¹²

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DISCLOSURE

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