Are you current with VTE prevention techniques?

BY GARY CULBERTSON, MD

The 90-day moratorium on certain office-based surgery (OBS) procedures instituted in 2000 by the Florida Board of Medicine sparked an acute interest in the prevention of venous thromboembolus (VTE) – particularly among regulating agencies. Certain procedures have been associated with an increased incidence of VTE, including hysterectomies, colectomies, hip/knee replacement – and abdominoplasty. The 2012 Plastic Surgery Statistics Report reveals that last year alone, ASPS members performed more than 106,000 abdominoplasty procedures, making it the sixth-most commonly performed cosmetic procedure in the United States.

In 2009, ASPS established the VTE Task Force in response to U.S. Surgeon General Steven Galston's "Call to Action to Prevent Deep Vein Thrombosis and Pulmonary Embolus," which he issued in 2008 to address those two potentially life-threatening conditions. The recommendations from the ASPS VTE Task Force have been presented at national and regional meetings and are available on the ASPS website at *plasticsurgery.org* (type "pathways to prevention" in the search box).

The lay public, attorneys and even state medical boards are now acutely aware of the need for the perioperative VTE screening and prevention. Failure to abide by these recommendations can be devastating to patients – and possibly your plastic surgery practice. The following is an actual case that was reviewed for a medical legal action; names, locations and identifiers were changed for privacy.

Annabell is a 48-year-old, uninsured white female who measures 5-feet 8-inches tall and weighs 165 pounds. She has four children – as well as a history of hypertension and cervical cancer. She's evaluated for an abdominoplasty and breast augmentation by Jarvis GreatBody, MD. Annabell had no trouble with her hysterectomy and received adjuvant pelvic radiation therapy more than five years earlier. Presently, she has no evidence of disease; she's stable on hormone replacement therapy and her preoperative EKG is normal. At an OBS center, Annabell undergoes a five-and-a-half-hour bilateral breast augmentation, as well as an abdominoplasty with liposuction of the flanks. Sequential compression garments are initiated prior to the induction of the general anesthesia and continued until she's discharged from the surgical facility at 5 p.m. She's seen the next day after the combined procedure; she's doing well and told to come back in one week.

On postoperative Day 4, her sister – who's a nurse – phones the office to request a laxative, as Annabell has not defecated since before her surgery. Two bottles of magnesium citrate are prescribed. That evening, her husband calls frantically, stating that his wife is having great trouble breathing. EMS personnel arrive at their home expeditiously. In the process of intubation, Annabell vomits and aspirates. She's taken to the hospital and stabilized in the ICU. Dr. GreatBody is out of town, and he has not arranged any cross-coverage for his private practice patients. The hospital intensivist, Dr. Lifesaver, assumes care of Annabell. Dr. GreatBody cuts the family vacation short and arrives two days later.

It's been determined that Annabell has suffered a pulmonary embolus (PE) with aspiration pneumonia and is likely brain dead. The family insists that everything be done. She spends the next four weeks in the ICU. Over this period of time, the family learns their surgeon has had several other patients who've suffered DVTs or PEs over many years of his practice. Dr. GreatBody sees Annabell and her family daily, trying to be supportive in the wake of this adverse event. The incident is unfavorably publicized throughout the hospital and community (this has been spurred on by Dr. GreatBody's competitors). Despite all efforts, Annabell expires from an acute cardiopulmonary arrest. Her family insists that her body be given for organ donation. They are very irate, blame her surgeon for her death, post multiple unfavorable ratings online, set up a website defaming Dr. GreatBody and file complaints with the hospital and the state medical board.

One week after Annabell's death, Dr. GreatBody receives a summary judgment from the medical board for suspension of his medical license, in which he is labeled "a threat to the community at large." Surgical privileges at three hospitals are summarily revoked over the next few days. Despite good attorney support and an expeditious hearing with $12,000 in fines levied, the surgeon has been found by the medical board to be guilty of practicing "substandard care in multiple patients and (of) abandonment." The matter is expeditiously reported to the National Practitioner Data Bank.

After review, the malpractice carrier agrees to settle the matter out of court with Annabell's family. Dr. GreatBody loses almost all of his staff, his business faces bankruptcy and his wife files for divorce. Unable to get any assistance, facing mounting debt, grappling with his failed reputation and in a fit of depression, Dr. GreatBody attempts suicide.

What constitutes the "substandard care" provided by this plastic surgeon? The medical board concluded there was a "failure to properly preoperatively screen patients for VTE and provide the appropriate perioperative care to prevent DVT/ PE occurrence." A lack of appropriate cross-coverage for his private patients while away on vacation was deemed "abandonment."

This patient did present with several risk factors, such as age over 40, BMI over 25, a history of malignancy, major surgery (combined procedure) and hormone replacement therapy not stopped preoperatively, giving her a Total Caprini Risk Score (*see sidebar below*) of 7. Evidence-based data reviewed by the ASPS Patient Safety Committee and published by the ASPS VTE Task Force would have strongly supported the consideration of postoperative use of low molecular-weight or unfractionated heparin, in addition to sequential compressive garments and early ambulation for the prevention of VTE.

Are you up-to-date when screening your patients for perioperative VTE? Do you know how to determine a Caprini Score? For the safety of your patients, the ASPS Patient Safety Committee recommends becoming up-to-date with the screening and prevention of VTE – particularly for your abdominoplasty and combined-procedure patients.

CME is available at *psenetwork.org* – and there's a VTE Prevention Patient Safety Course offered at every ASPS annual meeting. This year, Plastic Surgery The Meeting will be held Oct. 11-15 in San Diego. For information, go to *plasticsurgery.org*, click on "Medical Professionals," then "Resources and Education" followed by "Education Calendar," and scroll down to "Plastic Surgery The Meeting 2013." PSN

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The Caprini Test

The Caprini Test is a risk assessment tool utilized by physicians to determine the risk level of a patient getting VTE postoperatively. The tool is a point-based questionnaire that allows physicians to assign risk to their patients by assigning them a number based on type of operation, age and the presence of additional risk factors. Questions in the survey range from whether a patient is obese or has swollen legs – which are considered one-point risk factors – to whether the patient has had a stroke or an acute spinal cord injury within the past month – which are 5 point risk factors. Those with higher point totals have seen higher incidences of DVT in patients and are at the highest risk of VTE. Using this tool, physicians can better determine the appropriate thrombosis prophylaxis to patients in postoperative care. To learn more about the Caprini Test, visit the PubMed website at *www.ncbi.nlm.nih.gov/pubmed/21093314* to read "Validation of the Caprini RIsk Assessment Model in Plastic and Reconstructive Surgery Patients" or go to the *Plastic and Reconstructive Surgery* website at *PRSjournal.com* to access "Evidence-based practices for thromboembolism prevention: summary of the ASPS Venous Thromboembolism Task Force Report." PSN