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## A Simple Checklist for Preventing Major Complications Associated With Cesarean Delivery

### *To the Editor:*

With enthusiasm, I began reading the commentary, "A Simple Checklist for Preventing Major Complications Associated With Cesarean Delivery," by Duff.[1] My enthusiasm waned when I read the section "Postoperative Intervention." The two items listed do not have evidence supporting their inclusion. Duff cites Marik and Plante[2] to justify the items' inclusion; this is a review that cites two other reviews and does not cite any direct references. Marik states that no adequately powered randomized controlled studies have been performed after cesarean delivery. Bates et al[3] (cited in Marik) cites small studies demonstrating no efficacy. Bates states, "Given the absence of data … recommendations regarding thromboprophylaxis are by necessity based on extrapolation from other patient populations."[3]

These extrapolations may be incorrect. Unfractionated heparin for third trimester thromboprophylaxis[4] and for postcesarean thromboprohylaxis[5] may be inadequate. To allow neuroaxial anesthesia with cesarean delivery, low molecular weight heparin prophylaxis is started postoperatively. In nonpregnant populations, prophylaxis starts preoperatively because the highest risk is during surgery. The hypercoagulation of pregnancy and fibrinolytic changes with placental detachment may overwhelm any increased fibrinolysis that the intermittent compression may impart.

In closing, I find it ironic that the next commentary in the journal warns of the perils of adopting any strategy without data.[6]

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### *In Reply:*

I am very sorry that Dr. Brancazio's enthusiasm waned as he read the final part of my clinical commentary.[1] I hope he will agree that the preoperative and intraoperative interventions I recommended are well supported by consistent level I and level II scientific evidence.

I agree that the recommendations regarding prophylaxis for thromboembolism are based on more tenuous level III evidence and extrapolation from clinical studies performed in patients having nonobstetric procedures. He is also quite correct in expressing concern about the possibility of serious neurologic complications in patients who receive low molecular weight heparin in close temporal proximity to neuroaxial anesthesia. This concern makes it potentially dangerous to administer prophylaxis before or during surgery in patients who have received either epidural or spinal anesthesia.

Clearly, we need a large prospective randomized trial to confirm the best approach to prevention of potentially life-threatening thromboembolic events after major obstetric procedures such as cesarean delivery. In the absence of this type of trial, however, I believe that prudence dictates some systematic approach to patients at moderate to high risk for thromboembolism. Pneumatic sequential compression stockings and/or prophylactic doses of either fractionated or unfractionated heparin are the mainstays of such an approach and are endorsed by the Surgical Care Improvement Project. Clearly, the correct dosing and timing of these interventions remain fruitful areas for future research.

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## Does Standardization of Care Through Clinical Guidelines Improve Outcomes and Reduce Medical Liability?

### *To the Editor:*

I read with mixed feelings your article by Kirkpatrick and Burkman.[1] As a

former department chairperson and residency program director, I remain concerned about the unintended consequences of such guidelines–that in striving to bring all to a minimal standard of care, we get exactly that: a minimal standard.

The availability and enforcement of standard guidelines has an effect of elevating substandard care, improving outcomes and therefore decreasing litigation. Algorithmic medicine is alluring being easy to practice and defend. Yet cookbook medicine doesn't serve all patients well and challenges our ability to teach residents to think creatively when a patient's disease isn't fitting neatly into the flowchart.

American medicine ought to strive for the highest, not the minimal standard. We must provide latitude and protection for those specially experienced to provide significant refinement above the standard of care. We must ensure that research and clinical innovation may still go forward. We must preserve a patient's right to find and receive reasonable treatment options beyond that in the standard guideline.

The example cited on vaginal birth after cesarean delivery (VBAC) is illustrative. Guidelines have brought a reduction in VBAC. VBAC patients are not welcome in many practices. Some are driven toward seeking home birth, and others tragically suffer morbidity, loss of fertility, and even mortality from complications of placenta accreta related to repeated cesarean deliveries. Have the guidelines served these women well? It can be too difficult to undo practice once there is a dogmatic standard.

The nature of scientific progress is that new knowledge challenges current practice. We ought to adopt guidelines to assist doctors in making good decisions; however, these guidelines must be deliberate in ensuring latitude for individualized care. Guidelines alone aren't enough. To really improve outcomes and reduce liability, individual outcomes must be published. Outcomes allow for comparison and self-improvement. Furthermore, the public has a right to these metrics. Those doctors with persistently good outcomes and low complication rates ought to be allowed to practice as they see fit and not be enslaved by a general guideline.

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### *In Reply:*

Dr. Mussalli is concerned whether the increased use of protocols, algorithms, and guidelines fully enhances the practice of medicine. In particular, he states that their widespread use may hamper the ability of skilled practitioners to use alternative approaches to care. He also suggests that, despite their effect of elevating substandard care, they encourage a minimal standard, with less thought being given to individual preferences or other treatment options. For example, in his experience, he suggests that residents in training rely too much on such tools rather than fully discussing all approaches to a given patient's care. In my view, it is the role of the teacher to promote additional discussion of alternatives to diagnosis or treatment. Often, after such discussions, a particular approach or algorithm may, in fact, be the correct one for a given patient. However, hopefully the prior discussion will not only be an appropriate intellectual exercise, but also will provide adequate support for a given algorithm's use. It should be noted that in an era of increasing complexity in clinical practice coupled with time constraints in providing care, such guidelines allow practitioners to be more efficient and also reduce the possibility of error. In fact, many practitioners, particularly those from smaller hospitals, have requested more assistance from organizations such as the American College of Obstetricians and Gynecologists in developing a variety of protocols that can be put to use in their institutions. In general, their guidelines, published as practice bulletins or committee opinions, require literature that is evidence based to back them up, and are seldom proscriptive. Further, most are published with a proviso that alternative approaches may be appropriate. Dr. Mussalli's conclusion that guidelines have brought a reduction in vaginal birth after cesarean delivery certainly has some merit. However, equally to blame for the reduction in vaginal birth after cesarean delivery utilization is increased concern relative to medical liability as well as the catastrophic nature of the complications. Although we may feel that the current climate, which includes increasing use of guidelines, is hampering some of our individuality relative to how we deliver care, at the end of the day, if such care is safer, more effective, and perhaps less costly, it will ultimately benefit our patients.

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## The Cavitated Accessory Uterine Mass: A Müllerian Anomaly in Women With an Otherwise Normal Uterus

### *To the Editor:*

We read with particular interest the article by Acien et al on the pathogenesis of intramural or subserous noncommunicating accessory uterine masses and cavitated accessory uterine masses separate from the uterus.[1] Among the cases of cavitated accessory uterine masses with functioning endometrium cited by the authors are three cases in which the uterus-like structures were entirely separate from a normal uterus, with two normal fallopian tubes and two normal ovaries in normal anatomic position.[2,3,4]

We suggest the functioning accessory uterine mass described by Oliver "located in the substance of the right broad ligament about midway between the normal uterus and the right pelvic wall,"[2] the "uterus-like mass … [with a] … well-formed fallopian tube" arising in the right broad ligament described by Ahmed et al,[3] and the functioning "4×4 cm [uterus-like] mass" in the left broad ligament "without definitive connection with the uterus" described by Liang et al[4,5] are examples of müllerianosis–developmentally misplaced müllerian tissue–and as such, have a different pathogenesis from the five cases of uterine cavitated accessory uterine masses described by the authors.