Aortic cross-clamping and REBOA. However, PAC is potentially safer than aortic cross-clamping and REBOA, with no incidence of vessel injury, thromboembolic phenomenon, or reperfusion injury in 158 procedures performed across 7 centers in India over the past decade.

In the event of unexpected obstetrical hemorrhage owing to PAS, we recommend that the operator immediately use the IMAC technique to occlude the aorta while the assistant applies the PAC within seconds. If the aorta is difficult to reach, a pair of the same clamps can be applied on the common iliac arteries, achieving temporary pelvic devascularization. We believe these techniques, working complementary to each other, can hasten hemostasis safely and avoid hemorrhage-associated maternal morbidity and/or mortality.

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Internal manual aortic compression is an important piece of the puzzle
We appreciate the interest of Paily1 in our article on internal manual aortic compression (IMAC); he makes several points that merit further discussion as follows:

1. IMAC is a temporary move. It should be used immediately in the event of massive bleeding while other strategies for definitive control of bleeding are applied. IMAC is just 1 resource among many that obstetrical care teams must have. IMAC can and should be combined with other interventions as an essential piece of the puzzle for treating postpartum hemorrhage.
2. IMAC must apply sustained and intense pressure that can lead to fatigue and ineffective compression. We recommend adopting a position similar to that used for chest compression during resuscitation (Figure, A).

3. We disagree with the statement, “transverse suprapubic incision standard used to perform a cesarean delivery may not be sufficient to access and compress the aorta.” In our experience, the transverse incision has been sufficient to perform aortic compression even for 60 minutes.

4. “IMAC limits pelvic dissection, especially of the vesicouterine space.” It is essential to point out that IMAC is helpful in all etiologies of massive pelvic bleeding, especially when there is hemodynamic instability. Gratuity and immediate application after minimal training allow its use in any scenario in a critical situation. This maneuver is universally available for all obstetricians worldwide without the requirement of any external device, which can be the origin of catastrophic consequences. The afterload increase and the immediate control of blood loss, makes it valuable in situations where extensive pelvic dissection is not required, such as ruptured ectopic pregnancy and uterine atony, which are much more frequent than placenta accreta spectrum (PAS). Even in PAS, performing a part of the surgery while applying IMAC (Figure, B) is possible. In addition, simple and risk-free instruments can facilitate IMAC without taking up as much space in the surgical field.

Finally, in our experience, invasive vascular procedure complications come from accumulating cases. With Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) applied by experienced surgeons, our initial experience was almost risk-free. However, after REBOA implantation in 54 PAS patients, we observed 4 arterial thromboses, 1 femoral artery posterior wall perforation, and a balloon application in the inferior vena cava. We recommended invasive vascular interventions be performed only on PAS patients with a higher risk of bleeding (those with vesicouterine fibrosis or parametrial involvement) and exclusively by personnel with skills to repair possible vascular complications.

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A dilemma of antenatal corticosteroids for long-term consequences

TO THE EDITORS: Antenatal corticosteroids (ACS) are known to accelerate fetal lung maturation and prevent preterm neonatal mortality, respiratory distress syndrome, and brain injury. The American College of Obstetricians and Gynecologists has expanded its recommendations for the use of ACS to late preterm and early term deliveries. Under such guidelines, the proportion of infants who are exposed to synthetic corticosteroids has substantially increased. In the setting of a large infant population being involved, it is imperative to evaluate the long-term safety of ACS, especially after a population-based cohort study that reported a hazard ratio of 1.47 of any mental or behavioral disorder in children born at term who were exposed to ACS.

For this purpose, Osteen et al recently determined the long-term outcomes in term-born children ≥5 years old who were born to mothers receiving ACS compared with controls whose mothers were also evaluated for threatened preterm labor but did not receive ACS. They found that the former babies have increased odds of being in a lower growth percentile than those not exposed; the rates of diagnoses such as asthma, developmental delay, and attention deficit disorders were not different. This study indicates a need for more judicious use of ACS in women who may not be likely to deliver until term. However, this study raises some important issues that should be addressed.

There were statistically significant differences between the 2 groups for their birth characteristics regarding birth length, head circumference, and birthweight. The authors said none of these differences were clinically significant. In that case, considering no statistically significant difference for height or length percentile, why is the weight percentile (<10%) difference between the 2 infant groups clinically significant (<10%)? Furthermore, the retrospective study design could not exclude the confounding factors of the mothers. For example, for the ACS-exposed group, the mothers were younger and had higher rates of diabetes and hypertensive disorders. The abnormal pregnancy events that lead clinicians to administer steroids might also predispose the exposed children to have a lower growth percentile. This study lacked information about steroid type, dosing, or timing of exposure, making it impossible to determine whether these factors were relevant.

Nevertheless, we agree with Osteen et al that though the benefits of ACS outweigh the risks in those vulnerable infants, this may not be suitable for all infants. Continued efforts are needed to select true high-risk cases among women considered to be at risk for preterm labor to ensure that ACS therapy is offered with more benefit than harm (Figure).

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FIGURE

Antenatal corticosteroids treatment for women with threatened preterm labor

Women considered at risk for preterm labor

Evaluation
(Symptoms, ultrasound, biomarkers, etc)

Women with true high risk for preterm deliveries within 1 week

Antenatal corticosteroids

Follow-up

Women with low risk for preterm deliveries