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The MANTA vascular closure device: Requiring attention from beginning to end, reply

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Editorial Comment

We have read with interest the comment by Chaudhuri and colleagues on our recent paper describing the complications of MANTA closure device (Teleflex, PA, USA) reported to the FDA [1]. The authors make a valid point on the need for more literature on using MANTA by vascular surgery during endovascular aortic aneurysm repair procedures. However, it should be noted that endovascular procedures represented 20% of patients in the SAFE MANTA study [2]. They also describe their successful use of the device while being prospectively audited. We cannot agree more with the points made by the authors on the importance of meticulous techniques for access and closure to avoid the complications of MANTA mentioned in the original manuscript.

As Chaudhuri et al. mentioned, the MANTA device has been mainly studied in the TAVR population. Another cohort of patients lacking research on the use of MANTA for closure is the cardiogenic shock and mechanical circulatory support (MCS) cohort [2]. These patients represent the highest risk for vascular closure complications due to their high-risk profiles and the urgency when placing the MCS device. In emergencies, the premeasurement step is usually ignored, increasing the risk of measuring and deployment errors. These patients also tend to have MCS devices for a prolonged period, potentially developing groin hematomas altering the original measured depth if present. In our center, we have developed a solution to overcome these pitfalls. All our femoral accesses are performed with fluoroscopy and ultrasound guidance, and the exact puncture site is always saved on fluoroscopy. We have developed a method to use a fluoroscopy-guided MANTA deployment technique as follows: 1) exchange the MCS device for MANTA as regular, 2) start retracting the device under fluoroscopy until the tip of the device is 1 cm above the access site reviewed on fluoroscopy, 3) release the anchor and deploy the device as regular. This technique has been very successful in our experience. Although the 14-Fr. depth locator will help mitigate the risks of measurement errors with the Impella CP device (Abiomed, USA), fluoroscopy-guided MANTA closure would still be needed in larger arterial sheaths (e.g., ECMO and TandemHeart devices (LivaNova, USA)).

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Declaration of competing interest

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