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## Commentary: Daytime or nighttime acute type A aortic dissection repair? Does it really matter?

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Acute type A aortic dissection (ATAAD) is a life-threatening condition and a true surgical emergency with a mortality rate of 1% to 2% per hour and overall mortality of 60% at 48 hours if not treated surgically.<sup>1-3</sup> Emergency open surgical repair remains the gold standard and is shown to reduce in-hospital mortality to 15% to 25%.<sup>4,5</sup> Based on different clinical presentations, patients with ATAAD could be grouped into different categories that determine the optimal management strategy. Immediate surgical repair is recommended in the presence of coronary or cerebral malperfusion or acute aortic insufficiency. On the other hand, in patients with visceral or limb malperfusion at the forefront of their presentation, it is reasonable to address visceral and/or limb ischemia first, particularly in the face of significant metabolic derangement or concerns about bowel viability.<sup>6</sup> In reasonably stable patients, a transfer to a dedicated aortic center should be considered.<sup>7</sup> A significant pericardial effusion with impending tamponade may be drained before the transfer. Several studies have demonstrated improved outcomes following ATAAD repair in high volume aortic centers with teams experienced in open and endovascular surgery.<sup>8</sup> However, there are

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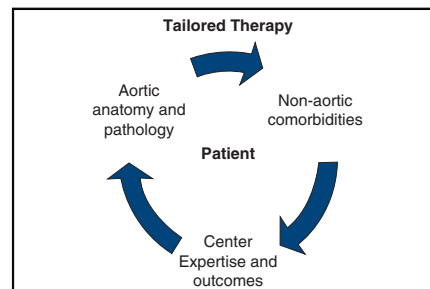
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The importance of experience and tailored therapy in acute type A aortic dissection.

### CENTRAL MESSAGE

Surgical repair of acute type A aortic dissection has evolved over time and a dedicated team with open and endovascular expertise can optimize outcomes regardless of the time of day.

conflicting data regarding the impact of daytime versus nighttime surgery on the outcomes of surgical repair.<sup>9,10</sup>

Harky and colleagues<sup>11</sup> took an interesting approach and investigated the timing of surgical repair of ATAAD in correlation with the establishment of dedicated aortic teams. The authors demonstrated that at their hospital, there was no difference in 30-day mortality following ATAAD repair whether the surgery was performed during the daytime or nighttime. They also demonstrated that the establishment of a dedicated aortic team played a major role in reducing postoperative mortality following ATAAD repairs despite the performance of more extensive repairs, including frozen elephant trunks compared with the preaortic team era. One unexpected finding is the increase in duration between presentation and surgery in the specialized aortic team era.

This study comes with the inherent limitation of being a single-center retrospective study with lack of granularity regarding the clinical presentation, including hemodynamic stability and the nature of the malperfusion syndromes. Therefore, it is not possible to determine the percentage of patients with hyperacute features and appropriately adjust for them. In addition, we do not have the true denominator of patients who presented with ATAAD because those who were declined surgery or died before surgery were not captured. Nevertheless, this report is an important addition to the current literature on the surgical management of ATAAD and its findings are consistent with the 2021 American Association for Thoracic Surgery Expert

Consensus on surgical treatment of acute type A aortic dissection.<sup>12</sup>

Several technical advances have been made during the past decade in the care of patients with ATAAD, such as the frozen elephant trunk technique and its many variations, as well as a number of promising endovascular strategies that could be offered to a group of patients otherwise deemed inoperable. A dedicated team facile with those innovations can provide timely and optimal care and optimize patient outcomes.

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