Regarding "Aortic rupture during STABILISE (stent-assisted balloon-induced intimal disruption and relamination in aortic dissection repair) technique"

A recent case report presents a case of infrarenal aortic rupture while using a compliant balloon to mold the true lumen inside previously placed bare metal stents during the STABILISE (stent-assisted balloon-induced intimal disruption and relamination in aortic dissection repair) technique at the chronic stage of a type B aortic dissection.[1] The authors concluded that caution is advised for providers who wish to perform the STABILISE technique and recommended using a semicompliant balloon sized to the smallest total aortic diameter to mitigate the risk of rupture.[1]

I have several comments regarding this case report.

First, I commend the authors for presenting this complex and highly interesting case, which underscores the nontrivial nature of the STABILISE technique, used for the past 10 years to more extensively remodel type B aortic dissections in the acute, subacute, and, even, chronic stages, thereby improving the short- and long-term prognosis of this severe pathology.[2-6]

Additionally, I inquire about the smallest total aortic diameter at the level of the abdominal aorta and the size of the Tri-Lobe balloon catheter (W.L. Gore & Associates) used. The Tri-Lobe balloon comes in two sizes, a small size for 16- to 32-mm diameters and a large size for 26- to 42-mm diameters. The use of an oversized balloon could increase the risk of aortic rupture.

Next, as reported by the authors, it appears in their Fig 2 that the balloon protrudes from the bare metal stent without deforming it, suggesting that the balloon is inflated in the false lumen or, at least, outside the bare metal stent. This possibility is reinforced by their specification that the wire should repeatedly pass through the interstices rather than through the middle of the bare metal stent. Also, they did not provide a description of an angiographic completion scan to ensure proper positioning of the balloon in the true lumen. Inflating the balloon outside the lumen of the bare stent could also increase the risk of aortic rupture.

Finally, before performing Tri-Lobe inflation, the authors report that the introducer failed to advance into the aorta because it caught on the struts of the bare metal stent. This could have resulted in malpositioning of one of the stents, as already reported, and predisposed to rupture during balloon inflation. The use of semicompliant balloons likely reduces the risk of aortic rupture during inflation, provided the balloon is not oversized, inflation is performed within the lumen of the bare metal stent, and there is no misplacement of the stent.

DISCLOSURES

None.

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https://doi.org/10.1016/j.jvscit.2024.101501