

STABILISE: The Way to Go in Treatment of Complicated Aortic Type-B Dissections?

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Thoracic endovascular aortic repair (TEVAR) for complicated B dissection is a well-known treatment aiming to close the primary entry tear. However, this may not be not enough, as almost 30% of the patients treated with TEVAR experience false lumen expansion in the long-term follow-up which usually requires complex treatment [1]. The provisional technique extension to induce complete attachment (PETTICOAT) was introduced into praxis in 2006 with a satisfactory outcome in patients with dynamic malperfusion in complicated type B dissection [2]. Although a recently published article shows a promising high remodelling rate in the infrarenal aortic segment using the PETTICOAT technique [3], the rate of incomplete, false lumen thrombosis of the infrarenal aorta still remains a problem. The technique of “Stent-Assisted Balloon-Induced Intimal Disruption and Relamination in Aortic Dissection Repair (STABILISE)” was introduced in 2014, with additional balloon-induced intimal disruption of the dissecting membrane after the dissection stent is deployed like in the PETTICOAT technique aiming to create one channel by completely obliterating the false lumen [4]. The same group described 100% technical success in a small number of patients with 100% aortic remodelling and no aortic rupture.

In their paper “Technique-based evaluation of clinical outcomes and aortic remodelling following TEVAR in acute and subacute type B aortic dissection” published in this issue of CVIR, Zhong and colleagues present the

results of 29 patients with acute (72%) and subacute (28%) complicated type B aortic dissection treated with TEVAR, PETTICOAT and STABILISE techniques [5]. The technical success was 100%. All STABILISE patients had complete thoracic aortic remodelling, and 91% had either complete or partial aortic remodelling of the abdominal aorta in a mid-term, median follow-up of 31 months. The significant complication rate was low; however, one contained rupture occurred in the aortic during the balloon moulding, treated successfully with an abdominal aortic stent graft. There was no problem to cannulate visceral vessels in the case of visceral vessels take off from the false lumen when applied this technique, and all the visceral artery stents were patent during follow-up. In contrast, TEVAR alone achieved complete thoracic aortic remodelling in 85% patients and but abdominal aortic remodelling (complete or partial) occurred in only 50% patients [5]. Similarly, Faure et al. describe the results of the STABILISE technique in 41 patients with a 100% technical success, no aortic rupture and complete aortic remodelling in all cases [6] in the mid-term follow-up.

So, we are going in the right direction when we look after complete false lumen obliteration. The “one channel idea” is very logical and is based on the open surgical principles. So far, the published results from the various authors confirm this fact and the question is why STABILISE technique is not widely adopted? Of course, the risk for aortic rupture during moulding is real, as described by Zhong et al.. However, this, to the best of my knowledge, is the only published case of rupture so far [5].

All the complications occurred in patients treated in the acute phase, suggesting that the best time for treatment is the subacute phase whenever possible. The presented work by Zhong is limited with a small number of the patients and

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the small number of the patients treated with the PETTICOAT technique but as the author stated the main goal was to assess aortic remodelling which is impressive in the STABILISE group, especially when compared with the TEVAR-only group. However, the comparison between the PETTICOAT and STABILISE techniques is warranted as well as long-term results data.

Another exciting aspect of this series is that 20% of patients had connective tissue diseases, mainly patients with Marfan's syndrome were treated in the presented study with a good outcome and no complications. It would be interesting to know more about in the longer-term follow-up of this subgroup.

To conclude, congratulations to Zhong and colleagues on a well-written manuscript. Their results add more date to the existing literature and emphasize the promising potential of the STABILISE technique in terms of aortic remodelling.

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