

Preface

Dear colleagues and readers,

It is a privilege for me to serve as Guest Editor for the current issue of the *Annals of Cardiothoracic Surgery (ACS)*, which focuses on type B aortic dissection. This is a complex cardiovascular emergency of the descending thoracic and abdominal aorta, which may be associated with complicated or uncomplicated clinical status in the acute setting. In patients with aortic rupture, malperfusion, and/or refractory pain, thoracic endovascular aortic repair (TEVAR) has become the therapy of first choice over the last decade, while antihypertensive medical management is the preferred approach in uncomplicated cases.

Currently, evidence indicates that 30-50% of patients treated medically may develop complications in the chronic phase, such as aortic dilatation and rupture. In order to prevent such complications, it has been advocated that this cohort may benefit from early TEVAR management, despite potentially severe complications in type B dissection patients such as retrograde and/or antegrade dissection extension. Nevertheless, if not treated at the early stage, these patients could miss the opportunity of having the dissected aorta remodeled in a positive manner. For those presenting with descending or thoracoabdominal chronic post-dissecting aneurysms, open surgery still represents the preferred operative approach. In recent years, additional treatment options have been proposed including fenestrated/branched endovascular repair and hybrid interventions, with the aim of reducing the morbidity and mortality associated with the classic open operations.

There are still many questions which have not been fully addressed surrounding the clinical approach and management of type B aortic dissections. How do we treat patients presenting with catastrophic conditions like malperfusion and aortic rupture? Do we need to treat all type B dissections, regardless of their clinical scenario at presentation or it is useful to select those patients at higher risk for aneurysm and rupture, looking at predictors for aortic growth? What are the current treatment options and related operative results for chronic type B dissections? What are the long-term outcomes of these patients? What is the ideal and optimal approach for patients affected by connective tissue disorders?

Due to the voluminous subject matter, and with the contribution of numerous world-renowned experts, this topic warrants two issues of *ACS* to adequately provide in-depth analysis of the most contemporary studies regarding type B dissection. Intra-operative and mid/long-term results after open, endovascular and hybrid techniques are reported, as well as systematic reviews and meta-analyses. Video representations and detailed illustrations describe various cutting-edge approaches and techniques.

In an era where acute and chronic type B dissection has been intensely studied, this focused issue will provide an up-to-date overview on this aortic syndrome for its better understanding, treatment and results.

Finally, I would like to sincerely thank my surgical and scientific mentors, Professors Vincenzo Rampoldi, University of Milan, and Kim Eagle, University of Michigan, for having trained and inspired me on aortic diseases, in particular aortic dissection, with interest and passion.

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