

Preface

It is a great honor for us to serve as Guest Editors for the current issue of the *Annals of Cardiothoracic Surgery (ACS)*. This issue focuses on minimally invasive mitral valve surgery (MIMVS), which has become one of the most innovative new techniques in cardiac surgery within the last few years. Since Alain Carpentier, one of the pioneers in mitral valve surgery, first introduced mitral valve surgery through a mini-thoracotomy in 1996, tremendous developments have taken place. Improved surgical techniques, increased patient safety and innovative instrumental designs have led to an increasing acceptance of this technique in the cardiac community. Indeed at this point in time, there seem to be more patients requesting MIMVS than surgeons performing it. It is therefore likely that we will see a broader acceptance of MIMVS in the future, due to the “pressure” of patients and referring cardiologists. This trend is understandable, with patients experiencing an improved post-operative recovery due to the less invasive nature of the technique.

The current status of this technique, however, is the product of a “learning curve”. These days MIMVS is performed in a systematic setup and follows specific standards. Aside from the total endoscopic approach, which is now performed by Hugo Vanerman, Patrick Perrier, ourselves and others, simplification of the reconstruction techniques in mitral valve repair using the “loop technique” has been introduced by our team in Leipzig. This technique is especially suitable for minimally invasive access, because it is a simple, safe and reproducible technique, which can be easily performed through the limited access.

In the current issue, almost 30 manuscripts will cover a wide range of important topics in MIMVS.

The Keynote Lecture will describe transmitral HOCM repair with subaortic myectomy and total resuspension of the mitral valve through a minimally invasive approach. The Collaborative Research (CORE) Group from Sydney, Australia has performed three systematic reviews/meta-analysis, with topics including MitraClip, robotic mitral valve surgery and a comparison between conventional versus MIMVS. In a consensus statement, we aimed to ask a representative group of experts in the field of MIMVS their opinion with regards to indications and contraindications for this technique and address important aspects for training. Prof. J.F. Obadia from Lyon, France will describe his technique of total percutaneous femoral vessel cannulation in MIMVS. Dr. P. Davierwala and Dr. B. Pfannmüller from our team will describe the “Leipzig experience” and our experience with concomitant tricuspid valve repair. Dr. P. Perrier from Bad Neustadt, Germany reports his rate of repair with his technique.

A brief report of MIMVS in the elderly by Dr. J. Seeburger will be followed by a Perspective Article by Dr. S. Melnitchouk covering the surgical results of conventional versus MIMVS in Barlow’s Disease. There are three papers which address imaging in MIMVS: a state of the art paper by Dr. T. Noack, the value of TEE guidance by Dr. J. Ender and the use of imaging to aid considerations for interventions in patients with severe mitral valve regurgitation by Dr. R. P. Martin from the Emory University School of Medicine, Atlanta, USA.

A comparison of chordae replacement versus leaflet resection will be discussed by Prof. V. Falk from the University Hospital, Zurich and strategies and cardioplegic solutions for myocardial protection will be presented by Dr. J. Garbade. There is one illustrated article on the operative setup in MIMVS presented by Dr. S. Jacobs also from the University Hospital, Zurich.

We are pleased to have five experts in the field of mitral valve surgery participate in the video section “Masters of Cardiothoracic Surgery”: Dr. J.G. Castillo and Dr. D. Adams from Mount Sinai Hospital, New York, Dr. P. Perrier from Bad Neustadt, Dr. R. Suri from the Mayo Clinic and Dr. R. Chitwood from the East Carolina University present their specific technique in this section through a series of operative videos. Two articles address safeguards and pitfalls in MIMVS: one by Dr. M Czesla from the Sana Clinic Stuttgart, Germany and the other by Dr. M. Vollroth from our institution, who addresses conversion rate and contraindications for MIMVS.

Finally, we would like to take this opportunity to thank all contributing experts in the field of MIMVS for their great work in putting together this special issue. Without their participation, this issue of MIMVS would not have been possible. We would also like to express our deep gratitude to the Editors of the *ACS*, especially to Dr. Tristan Yan, as the initiator, motivator, head and driving motor behind the scenes.

We hope that this issue will serve as a “state of the art” summary of important aspects in MIMVS and that it will be of interest to the readers of the *ACS*. Enjoy reading this issue!

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