




## Back to the left

Devendra S. Saksena<sup>1</sup> 

Received: 10 August 2018 / Revised: 16 August 2018 / Accepted: 17 August 2018 / Published online: 20 September 2018  
© Indian Association of Cardiovascular-Thoracic Surgeons 2018

We have been involved in doing mitral valve surgery for *more than half a century*.

Initially, in the 1960s, we started with closed mitral valvotomy through the left anterior thoracotomy. Then, we thought that an open procedure would be better with more precise control and we could control the valve competence with an open procedure through a midline sternotomy.

In 1971, to make the procedure simpler and for a more direct approach, we started the superior approach to the mitral valve, which has now been widely adopted by the Cleveland Clinic and other centers after being neglected for some time, and they call it the Dome approach.

Minimally invasive surgery is getting increasingly popular and is in great demand today. Majority of the minimally invasive surgery for the mitral valve at present is done through a small right anterolateral thoracotomy.

We forget that the mitral valve is a left-sided structure and the left atrium is a posterior structure and the right anterolateral incision is a long distance from the mitral valve. Now, we can accomplish arterial and venous return through excellent groin cannulas available today. Since most of the mitral valve patients are relatively young, the concern for atheroemboli should be minimal. When the mitral valve is approached through the left side, the mitral valve is closer to the surgeon and the surgery can be accomplished with routine instruments. From the right side, the mitral valve is at a fair distance from the incision and one loses the tactile sensation essential for a good repair/replacement.

Advantages of approaching the mitral valve through the left side are as follows:

1. A small left anterior lateral thoracotomy on the fourth rib is adequate. Control of the ascending aorta is easily approached through the transverse sinus and the great vessels are looped and the aorta is controlled by subtracting the pulmonary artery.
2. Easy and secure excision of the left atrial appendage.
3. We can accomplish an excellent maze procedure either surgically or through some other energy source as the pulmonary vessels are directly accessible.
4. What is more important is that we can reduce the size of the left atrium (as patients with a large left atrium more commonly have atrial fibrillation which interferes with establishing of a sinus rhythm). Reduction of the left atrial size from a right-sided incision is impossible and from the mid sternotomy, very difficult.
5. Now, with increasing popularity of a beating heart mitral surgery, if one chooses to do a beating heart mitral operation, one can evaluate the mitral anatomy better and see the immediate results of the mitral valve repair. One has to flood the left chest with CO<sub>2</sub> to reduce any remote possibility of an air embolus.

We have done three cases in our unit last year with excellent hemodynamic and cosmetic results.

We should do an easy procedure and make it easier for the surgeon and do a better procedure for the patient. I think, in the last half of the century, we can come back to the left-sided approach that we initially started. Surgeons need to move out of their comfort zones in order to do something different and better.

---

✉ Devendra S. Saksena  
devsaksena@gmail.com

<sup>1</sup> Cardiovascular & Thoracic Surgery, Bombay Hospital Institute of Medical Sciences, Room no. 130, MRC, Bombay Hospital, Mumbai, Maharashtra 400020, India