Gulhane Military Medical Academy
Ankara, Turkey

^bDepartment of Cardiovascular
Surgery
Memorial Ankara Hospital
Ankara, Turkey

References

1. Dohmen PM, Misfeld M, Borger MA, Mohr FW. Current trends in aortic valve replacement: development of the rapid deployment aortic valve replacement with the EDWARDS INTUITY valve system. *Expert Rev Med Devices*. 2013;10:461-70.
2. Tavlasoglu M, Guler A, Yesil FG. Should sutureless aortic valve replacement be preferred only for decreasing aortic crossclamp time? *J Thorac Cardiovasc Surg*. 2014;147:1726-7.
3. Flameng W, Herregods MC, Hermans H, Van der Mieren G, Vercauteren M, Poortmans G, et al. Effect of sutureless implantation of the Perceval S aortic valve bioprosthesis on intraoperative and early postoperative outcomes. *J Thorac Cardiovasc Surg*. 2011;142:1453-7.
4. Minh TH, Mazine A, Bouhout I, El-Hamamsy I, Carrier M, Bouchard D, et al. Expanding the indication for sutureless aortic valve replacement to patients with mitral disease. *J Thorac Cardiovasc Surg*. 2014;148:1354-9.
5. Babaliaros V, Devireddy C, Lerakis S, Leonardi R, Iturra SA, Mavromatis K, et al. Comparison of transfemoral transcatheter aortic valve replacement performed in the catheterization laboratory (minimalist approach) versus hybrid operating room (standard approach): outcomes and cost analysis. *JACC Cardiovasc Interv*. 2014;7:898-904.
6. Giordana F, D'Ascenzo F, Nijhoff F, Moretti C, D'Amico M, Biondi Zoccai G, et al. Meta-analysis of predictors of all-cause mortality after transcatheter aortic valve implantation. *Am J Cardiol*. 2014;114:1447-55.
7. Iung B, Baron G, Butchart EG, Delahaye F, Gohlke-Bärwolf C, Levang OW, et al. A prospective survey of patients with valvular heart disease in Europe: the Euro Heart Survey on Valvular Heart Disease. *Eur Heart J*. 2003;24:1231-43.
8. Yan TD, Cao C, Martens-Nielsen J, Padang R, Ng M, Valletly MP, et al. Transcatheter aortic valve implantation for high-risk patients with severe aortic stenosis: a systematic review. *J Thorac Cardiovasc Surg*. 2010;139:1519-28.

<http://dx.doi.org/10.1016/j.jtcvs.2014.10.119>

WE HAVE TO BE PIONEERS: WE OWE IT TO THE FUTURE GENERATIONS

To the Editor:

...Each is given a bag of tools,
A shapeless mass,/A book of
rules;/ And each must make—
Ere life is flown—/A stumbling
block/Or a stepping stone.

—R. L. Sharpe, “A Bag of
Tools”

It was 1997 when I started my experience in cardiac surgery. It was a new world to my eyes, and I could hardly remain indifferent to the magic behind cardiac surgery.

I was consumed by the pleasure of reading about pioneers of the 1950s. Only nowadays I really understand their efforts in giving us the opportunity to operate on children who were previously destined to die. They were doctors, scientists, and engineers at the same time. I still strongly have in my mind the image of the first open-heart surgical operation: a grainy black-and-white photograph with more than 10 people surrounding the surgical bed and a heart-lung machine as big as a tractor!

What an incredible history behind cardiac surgery!

I recently attended a symposium in which I heard several doctors agree to surrender to the hypoplastic left heart syndrome. In my opinion this is, like laying down arms. Do we really want to fight only when we are sure to win?

What would have happened if W. Lillehei had never tried to close a ventricular septal defect with the cross circulation? What if A. Blalock had never tried to use his knowledge to treat tetralogy of Fallot?

It seems that the pediatric cardiac surgery has reached a limit that cannot be overcome. The limit is drawn by the actual capability of having a fetal diagnosis that helps us more and more to avoid the anatomic challenge and not take care of it. One can guess that a severe congenital defect could significantly affect quality of life. This is absolutely true until we are unable to find a solution. Our challenges are the same challenges of the past. Conversely, the society has changed and is asking us to use technologic advances to avoid problems and not to solve them. We should not be part of this mechanism.

I recently had the chance to speak with a pioneer of cardiac surgery. We were speculating about this argument when he told me, “We were inventors

and we had fantasy.” This phrase seemed like a sentence. And I found it was absolutely true.

For centuries, doctors have tried to improve their knowledge and sought to improve both the duration and the quality of life. We are required to have the same behavior. When facing a small patient suffering from a congenital heart disease, we shouldn't think him as having a “wrong birth” but rather as having inadequate care. This is the essence of medicine.

As a matter of fact, cardiac surgery for acquired disease is still in progress, because for adults there is no other choice than find a solution for complex situations. Modern medicine can't think of pregnancy interruption as the solution for complex congenital heart diseases.

We have to be pioneers; we owe it to the future generations.

Andrea Quarti, MD

Department of Paediatric and
Congenital Cardiac Surgery and
Cardiology
Ospedali Riuniti
Ancona, Italy

<http://dx.doi.org/10.1016/j.jtcvs.2014.09.086>

IS PLEURODESIS FOR THE TREATMENT OF PRIMARY SPONTANEOUS PNEUMOTHORAX A MISNOMER—AND IF IT WORKS, DOES IT MATTER?

To the Editor:

Pleurodesis has been used for more than 60 years to treat the complications of primary spontaneous pneumothorax, persistent or recurrent air leak. It has a commonly quoted success rate of 90% for this condition.

The term *pleurodesis* has developed 2 distinct meanings: (1) the instillation of an agent or physical abrasion to cause inflammation in the pleural surfaces and (2) adhesion between the visceral and parietal pleural

surfaces. Common usage often implies both meanings, but this is inaccurate. Although performance of pleurodesis may well be associated with this success rate, there must be doubt as to whether this is actually due to obliteration of the pleural space.

The presence or extent of adhesions produced in young patients after “successful” pleurodesis for primary spontaneous pneumothorax cannot be determined. There is no imaging method that allows accurate assessment of the extent of pleural adhesions. Ultrasonography may well allow assessment of limited intercostal regions before an interventional procedure, but it is totally inadequate in examining the entire thorax. A computed tomographic scan may identify pleural thickening but cannot recognize adhesion. Clinical examination is similarly limited. Thoracotomy or video-assisted thoracoscopic procedures in unsuccessfully treated patients will by definition demonstrate absent or limited adhesions; however, these findings cannot be extrapolated to successful cases.

Accurate measurement of the extent of adhesions can be determined in animal experiments. In a study of the efficacy of transforming growth factor β_2 in producing pleurodesis in sheep, Lee and colleagues¹ used a scoring system of 1 through 8 to rate pleurodesis in necropsy specimens. A rating of 7 indicated many adhesions with symphysis involving 25% to 50% of the hemithorax, and a rate of 8 indicated symphysis involving more than 50%.

In a study of optimal pleurodesis in dogs, Bresticker and coworkers² used a scoring system of 1 through 4, where 4 indicated adhesion of more than 1 lobe to the chest wall and mediastinum. It would seem that obliteration of the pleural cavity is an unusual result after pleurodesis. If adhesions were responsible for the 90% success rate quoted, this must then have resulted from the serendipitous location of one of the scattered adhesions over the site of air leak. Certainly the presence of adhesions alone does not prevent pneumothoraces, which are often seen with evidence of pleural tethering to the chest wall. It seems more likely that

this success is in fact due to the changes or sclerosis induced in the leaking visceral pleura by the sclerosing agent used or by the trauma to the opposing parietal pleura and associated hemothorax.

It is uncertain whether this change in viewpoint is more than a matter of semantics and accuracy. Perhaps attention to the changes produced in the visceral pleura, apparently “puncture proofing” the lung, may encourage the instillation of sclerosing agent when aspiration is used in the early treatment of primary spontaneous pneumothorax, to reduce the incidence of later complications.

Vincent Acton, MBBS (Syd),
FRANZCR
Sydney, New South Wales, Australia

References

1. Lee YC, Devin CJ, Teixeira LR, Rogers JT, Thompson PJ, Lane KB, et al. Transforming growth factor β_2 induced pleurodesis is not inhibited by corticosteroids. *Thorax*. 2001;56:643-8.
2. Bresticker MA, Oba J, LoCicero J III, Greene R. Optimal pleurodesis: a comparison study. *Ann Thorac Surg*. 1993;55:364-6; discussion 367.

<http://dx.doi.org/10.1016/j.jtcvs.2014.09.025>

Notice of Correction

Re: Osaki S, Locher MR, Lushaj EB, Akhter SA, Kohmoto T. Functional evaluation of human donation after cardiac death donor hearts using a continuous isolated myocardial perfusion technique: Potential for expansion of the cardiac donor population. *J Thorac Cardiovasc Surg*. 2014;148:1123-30.

In the above-mentioned article, the grant number of the University of Wisconsin Institute for Clinical and Translational Research Grant was incorrect. The corrected grant number is reprinted below.

This research was supported by University of Wisconsin Institute for Clinical and Translational Research Grant (UL1TR000427).