PLEURODESIS TO PREVENT MESOTHELIOMA

To the Editor:

I thank Mariette Baud, MD, and Patricia Forgez, PhD, for their response[1] to my letter noting an apparent lack of reported cases of mesothelioma after previous pleurodesis for pneumothorax.

I agree that no ''precise estimate'' of the number of such individuals is available but believe that ''hundreds of thousands'' is a reasonable estimate supporting the real possibility of a protective effect.

Talc was reportedly first used by N. Bethune to produce pleurodesis in 1935.[2]

Talc pleurodesis for the treatment of persistent or recurrent pneumothorax has been universally accepted since the 1950s. The occurrence of spontaneous pneumothorax and its complications is a worldwide problem with similar incidences in all nationalities.

Chest radiography equipment is available in all of the 190 or so countries in the world, allowing diagnosis of pneumothorax, intercostal tube placement, and instillation of talc to treat such complications. This has been basic medical practice, unreliant on high-powered technology.

Recent literature reveals many clinical reviews dealing with this topic from around the world, often citing more than 100 cases; for example, Kingston, Jamaica,[3] Suez Canal University Hospital,[4] Ansan Hospital, Korea,[5] Basel, Switzerland,[6] and Seville, Spain.[7]

And yet, obviously, few of the many thousands of medical facilities around the world providing talc pleurodesis have published their results in the literature.

It should also be remembered that the risk of asbestos contamination from early talc supplies and hence the possibility of talc insufflation causing mesothelioma was long recognized. It would seem unlikely that this occurrence could have escaped attention.

It is of interest that all those who have undergone talc, or similar, pleurodesis have developed well-recognized pleural changes including denudement of mesothelial cells, diffuse inflammation, fibrinous exudate, and collagen deposition. The extent of pleural adhesion achieved is uncertain but this is certainly incomplete. Therefore, it would seem likely that any such protection from mesothelioma is dependent on one or more of the former rather than requiring extensive pleural adhesion.

If such an approach was considered justified, this would greatly simplify provision by allowing a simple outpatient insertion of a fine catheter under local anesthetic, using appropriate imaging (ultrasonography) and instillation of talc slurry or similar, with discharge after 1 to 2 hours.

There would seem to be no real need for further consultation, examination, or investigation to attempt to assess the extent of pleural adhesions (pleurodesis) achieved.

Vincent Acton, MBBS(Syd), FRANZCR
Sydney, Australia

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http://dx.doi.org/10.1016/j.jtcvs.2013.11.024

Reply to the Editor:

We greatly appreciate the interest of Keshavamurthy and colleagues[1] in our recent work.[2] They emphasize the importance of a reliable closure of the sternum after transverse sternotomy.

Their closure technique is an interesting combination of several other closure techniques, including a beveled sternotomy, pericostal sutures, a reinforced wiring technique, and a single figure-of-eight. This method indeed seems sufficient to prevent sternal dehiscence. Unfortunately, they do not describe their outcomes or experiences with respect to sternal dehiscence.

Relative to transverse sternotomies, there is far more literature concerning the closure technique of median sternotomies. Knowledge of several adequate closure techniques might improve quality of sternal closure, however, because various techniques can be used in different clinical situations.

As outlined by Keshavamurthy and colleagues, close attention to the closure technique of the transverse sternotomy may avoid sternal dehiscence and its associated problems. We encourage other authors to share the various sternal closure techniques that they use, their experiences with them, and the related incidences of sternal dehiscence.

Theodoor D. Koster, MD[a]
Faiz Z. Ramjankhan, MD[b]
Johanna M. Kwakkel-van Erp, MD, PhD[a]
[a]*Department of Respiratory Medicine*
University Medical Centre Utrecht
Utrecht, The Netherlands
[b]*Department of Cardiothoracic Surgery*
University Medical Centre Utrecht
Utrecht, The Netherlands

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http://dx.doi.org/10.1016/j.jtcvs.2013.09.061

FATE OF THE PRESERVED AORTIC ROOT IN ACUTE TYPE A AORTIC DISSECTION

To the Editor:

I read with great interest the article by Rylski and colleagues[1] regarding the fate of unreplaced aortic root in patients with conservative aortic root repair for acute type A aortic dissection. By retrieving data concerning 119 patients undergoing supracoronary ascending aortic replacement for acute type A aortic dissection, they found that dissection of all aortic sinuses of Valsalva at the index procedure was an independent predictor for aortic root reoperation (odds ratio, 3.57; 95% confidence interval, 1.36-9.35; $P < .01$). During the follow-up period, 10 patients underwent reoperative surgery for aortic root replacement as a result of new-onset aortic root disease, including aortic root aneurysm, aortic valve insufficiency, and suture false aneurysm.

Note that reoperative surgery was performed in these 10 patients because of new-onset aortic root disease. Logically, factors determining new-onset root disease are also responsible for predicting reoperative surgery. How do Rylski and colleagues explain the absence of correlation between dissection of all aortic sinuses and new-onset aortic disease (odds ratio, 1.28; 95% confidence interval, 0.49-3.37; $P = .62$).

Rylski and colleagues[1] identified the extension of the dissection to the iliac arteries as another risk factor for secondary aortic root disease. Reports from the literature are sparse, with only a very limited number of studies published on the topic.[2,3] Ro and colleagues[4] recently published a retrospective study including 196 patients with an aortic root conservative repair for acute type A aortic dissection. The cutoff level for replacing the aortic root at the time of initial surgery remains controversial; however, the results of the study of Ro and colleagues[4] provide insights into the extent of aortic valve regurgitation and aortic root dilatation in this subset of patients, as well as a clearer indication for aortic root replacement during the initial procedure. They clearly demonstrate that patients with an aortic root diameter larger than 47 mm are at an increased risk for development of a root aneurysm, with subsequent intervention.

Taking into consideration these conclusions, it is easier to recognize those patients with acute type A aortic dissection in whom aortic root disease will develop during the follow-up. More aggressive approaches should therefore be considered for patients who have aortic root dissection of all sinuses, aortic root diameter larger than 47 mm, or dissection involving iliac arteries.

Jamil Hajj-Chahine, MD
Department of Cardiothoracic Surgery
University Hospital of Poitiers
Poitiers, France

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http://dx.doi.org/10.1016/j.jtcvs.2013.10.074

Reply to the Editor:

We value receiving useful feedback in another letter to the Editor from Dr Hajj-Chahine.[1] We also appreciate his summary of our results[2] and his question regarding the factors predicting new-onset aortic root disease and aortic root reoperation after surgery for acute type A aortic dissection with preservation of the sinus segment.

In our study of 119 patients with acute type A aortic dissection who underwent emergency ascending aortic replacement with sinus segment preservation, 26 patients exhibited evidence of new-onset aortic root disease during the follow-up period. Of these 26 patients, 10 required secondary proximal surgery. Dissection of all aortic sinuses of Valsalva was an independent predictor for aortic root reoperation (odds ratio [OR], 6.01; $P < .05$). However, this risk factor was not associated with new-onset aortic root disease (OR, 1.28; $P = .62$). A similar discrepancy was observed regarding dissection extending to the pelvic arteries, which was predictive of new-onset aortic root disease (OR, 3.57; $P < .01$) but was not predictive of root reoperation (OR, 1.65; $P = .48$). Although at first view, the predictors of new-onset aortic root disease might also predict aortic root repeat interventions, one should remember that this was an analysis of risk factors in 2 different groups, because not every case of aortic root disease requires repeat intervention. The risk factors for new-onset aortic root disorders and for root reoperations could, therefore, differ.

The advantages of aortic root preservation, such as avoiding coronary artery manipulation, reducing the crossclamp time, eliminating the risk of prosthetic valve endocarditis, and avoiding the permanent need for