PLEURODESIS TO PREVENT MESOTHELIOMA

To the Editor:

I thank Mariette Baud, MD, and Patricia Forgez, PhD, for their response¹ 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.

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Reply to the Editor:

We greatly appreciate the interest of Keshavamurthy and colleagues¹ 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.

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