To the Editor:

We read with interest the sternal closure technique advocated by Koster et al1 after a clamshell incision for double-lung transplantation. Different closure techniques have been advocated, including the use of sternal plates and screws.2 Although the approach affords excellent exposure, there are a few caveats to be kept in mind to avoid the pitfalls and complications related to sternal override and dehiscence that have been highlighted by Koster et al.1

We have used the clamshell incision in our institution successfully and wish to highlight a few of the salient features that we practice. First, by using an oscillating saw, a beveled transverse sternotomy is performed at an angle of 45°. This protects and prevents sternal over-ride and also stabilizes the sternum after closure. Second, the emphasis during closure is to obtain a good thoracotomy approximation. This is the key to avoiding tension on the sternal fragments. We use multiple nonabsorbable pericostal sutures for the thoracotomy closure, which provides strength to the closure. Third, we use a modification of the reinforced sternal wiring technique for sternal approximation3 wherein 2 parallel number 6 stainless steel sternal wires are placed in the space immediately above and below the transverse sternotomy, then 2 sternal wires are placed around the horizontal parallel wires. In addition, we also use a single figure-of-8 wire so that both fragments align properly. Fourth, the pericostal sutures placed for the thoracotomy closure are tied first and the sternal wires are approximated, leading to a stable and secure sternal closure. Finally, to avoid bunching up of sutures above the sternum, we use a few interrupted nylon sutures over the area of the sternal approximation. The chest radiograph (Figure 1) depicts our technique of sternal approximation.

We concur with the authors that meticulous attention to the closure technique is the key to avoiding complications related to sternal dehiscence. We commend the authors for highlighting this aspect regarding the clamshell approach.

Our purpose in emphasizing the closure technique is to allay fears over adopting this technique for bilateral lung transplantation.

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References

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EFFECT OF PREOPERATIVE RENAL FUNCTION ON LONG-TERM SURVIVAL AFTER CARDIAC SURGERY

To the Editor:

Congratulations to Dhanani and colleagues1 for their valuable study.