Reviewer’s report

Title: Adult lung transplantation case-volume and in-hospital and long-term mortality in Korea

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Reviewer: Jacob Bergsland

Reviewer's report:

It is always interesting see this type of paper which try to look at volume factors in surgery. Certainly the authors have taken on a difficult task by trying to compare low and high volume centers performing lung transplantation.

The problem with this paper is that the number of cases is relatively small and I also find it a bit strange to set the cut-off between high and low volume at 5. This is not a high number according to other publications. The authors claim that there is no difference in mortality and strictly speaking they can say that due to the p value of 0.052. But that number is really pretty close to significant.

Looking at Fig 1 all the centres performing less than 5 have relatively high mortality especially the real low volume centres that have clearly unacceptable results. Two centres with volume just above the cut-off have very low mortality while the center with the largest numbers have a higher mortality about 25%.

I think there are numerous factors potentially unaccounted for that could give more clarity about this number. Such factors may be difficult to get from an administrative database. Low volume centres may be very restrictive in the acceptance of recipients, while the bigger players may accept more difficult cases, and they may also accept lungs with longer ischemic time and other unfavorable factors. However, we have no information about this. Without further information about such factors it would be difficult to accept the conclusion made by the authors. Although the issue is still controversial, it seems documented for a number of procedures that higher volume gives better results, everything else being equal.

It seems to me that the conclusion of this study would be that there is a trend towards improved results in higher volume centers, but that it is possible to have good results in centres with low volume as low as 5. Centres with very low numbers have unacceptable results. Are the authors of this article working in one of the hospitals performing lung transplants? In that case I believe this should be mentioned as a possible conflict of interest.

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