Author's response to reviews

Title: UK pneumonectomy outcome study (UKPOS): a prospective observational cohort study of pneumonectomy outcome

Authors:

Ellie S Powell (elliepowell@doctors.org.uk)
Adrian C Pearce (adrian.c.pearce@btinternet.com)
David Cook (drdmcook@hotmail.com)
Paul Davies (pdaviesbch@blueyonder.co.uk)
Ehab Bishay (ehab.bishay@heartofengland.nhs.uk)
Geoff MR Bowler (Geoff.bowler@luht.scot.nhs.uk)
Fang Gao (fang.gao@warwick.ac.uk)

Version: 2 Date: 9 July 2009

Author's response to reviews: see over
Dear Mr V Zamvar

Re: MS: 5575840992772394

UK pneumonectomy outcome study (UKPOS): a prospective observational cohort study of pneumonectomy outcome

Thank you for your reviewer’ comments letter of 26th June regarding the above manuscript.

We have now addressed the issues risen by the referee and have revised the above manuscript accordingly. Please find our point-by-point response to the reviewer’ comments below.

Your and the reviewer’ invaluable comments and precious time have been very much appreciated by all of us. We believe that the revised manuscript has been much improved. We would be most grateful if you could consider this version for publication.

1) The first point raised was about our claim of representing UK practice as a whole. As was correctly pointed out, 7 centres did not wish to be included in the study and a further 4 did not perform any pneumonectomies in 2005. However all pneumonectomies performed in the UK are reported to the Society of Cardiothoracic Surgeons of Great Britain and they recorded 416 pneumonectomies for lung cancer for the year 2005-2006. This figure included extended and completion pneumonectomies which were not included in our study. Therefore our study of 312 pneumonectomies represents at least 75% of the cases performed in that calendar year. We feel that although we do not have data from all centres, we have studied a high enough percentage of UK pneumonectomies for the data to represent UK practice.

Action: ‘as a whole’ in page 6, 1st para has been removed from the sentence referenced by Mr Alvarez as we admit to not having studied UK practice in its’ entirety (100%).

2) The second point raised was the inclusion of treated arrhythmias in major complications. There is evidence that arrhythmias complicating lung cancer surgery is associated with poorer outcome. The most recent study from 2005 by Roselli et al. studied 604 patients undergoing lung cancer resection. They found an incidence of 19% of atrial fibrillation (AF) and that although AF was solitary in 66% of these cases in the other 44% it was associated with other post operative complications for example respiratory and infectious complications. They found that in 91 propensity-matched pairs, patients developing AF had more other complications (p < 0.0004), had longer post-operative stays (p < 0.0001), and had higher in-hospital mortality (p=0.01).[1]

Action: We have continued to include arrhythmias in our major complications.
3) The next point concerns the lower rate of right-sided pneumonectomies. Unfortunately we are not able to explain this from our data. We feel that U.K. surgeons do not actively select against right sided pneumonectomies but follow the British Thoracic Society guidelines to determine fitness for surgery.[2] This guideline uses a post-operative predictive FEV\textsubscript{1} of < 40% as a predictor of poor outcome. It may be that for borderline cases, surgeons are less likely to proceed with right sided operations due to the higher risk of broncho-pleural fistula and higher mortality compared with left sided procedures.

**Action:** Add to discussion paragraph (page 14) that side of surgery may be used in the selection process for pneumonectomy.

4) The next point is the high rate of on table conversions to pneumonectomy. Unfortunately we don’t have the data concerning the reasons for conversion. However in the univariate results table it demonstrates there was no difference in major complications between the planned and converted cases.

**Action:** No addition to manuscript.

5) The final point concerns the major complications associated with epidural analgesia. We feel that more research is needed in this area before a strong recommendation for paravertebral analgesia is made.

**Action:** Added explanation in discussion (page 14).

**References**
