Reviewer's report

Title: VATS intraoperative tattooing to facilitate solitary pulmonary nodule resection

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Reviewer: Khalid Amer

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General
The Authors describe two patients with three nodules in the lung, resected by VATS. They have assisted localisation of the lesions by tattooing the surface of the lung opposite each lesion, using Methylene blue, injected intraoperatively. They claim that the injection procedure is quick in their hands, and hint that it made removal of the nodules easier, and that patients were discharged on day 2 post surgery.

The subject is very interesting, and is visited by many publishers, but continues to intrigue minimal access thoracic surgeons. I have major reservations against this study/case report/how to do it publication. The following summarise my views:

1. The paper describe a very small number of nodules without recourse to their details, which I think of paramount importance; size of nodule, depth from surface of the lung in cm on CT scan, proximity to major airway or vessel, nearby fissure? what dimension of stapling device was used? a 45mm such as EZ45 (3.8 or 4.8)[Ethicon] or Eschelon 60mm etc. The latter detail pertain to ease of wedging the lesion.

2. No dimensions mentioned with regards to the wide margin clearance of the resected specimen. Although this wide margin clearance is controversial, and depends on the histological diagnosis, yet such mention is expected when discussing the subject of Solitary Pulmonary Nodule.

3. The tattooing technique described marks the surface of the lung only, and does not give a clue about the depth of clearance required at applying the stapling device. In my experience, and that of many minimal access surgeons, nothing short of finger palpation after applying the stapling device, and before firing the device, would ensure wide margin resection. It is also common practice to dissect the specimen outside the chest to ensure completeness of resection, and a satisfactory wide margin. Some would go the extra mile to corroborate that by adding frozen section inspection to the margin, in case more resection was needed. The paper over simplified the resection without mention of these points. It would be interesting to see how many resection margins were involved out of say 50 such resections?

4. If one is to believe that this technique is designed simply to locate the lesion at the surface of the lung (presumably after finger palpation), then it is very difficult
for me to identify its superiority over marking the surface of the lung with simple diathermy, or applying a ligaclip etc.

5. The lesions or nodules shown on the slides by the authors are typically very superficial, and of moderate size. An average surgeon should not find it difficult to palpate, and wedge out with a wide safety margin (at least 1 cm in my practice), without the need for extra help such as the technique described. It would have been useful to show deeper nodules and show how the technique could help with those?

6. Finally it would be interesting to know why these patients stayed 2 days in hospital? The usual practice is to discharge them on the first postoperative day provided the lung is up on chest x-ray and there was no air leak. Some authors are assessing that intraoperatively, to enable closure without a drain. The age of day case surgery is catching up!

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Reject as not sufficiently sound

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.