

# Tubeless uniportal carinal right upper lobectomy

Douglas J. Mathisen

Department of Thoracic Surgery, Massachusetts General Hospital, Boston, MA, USA

Correspondence to: Douglas J. Mathisen, MD. Chief, Department of Thoracic Surgery, Massachusetts General Hospital, 55 Fruit Street, FND 7, Boston, MA 02114, USA. Email: [dmathisen@partners.org](mailto:dmathisen@partners.org).

Submitted Nov 23, 2017. Accepted for publication Nov 29, 2017.

doi: [10.21037/jtd.2017.12.01](https://doi.org/10.21037/jtd.2017.12.01)

View this article at: <http://dx.doi.org/10.21037/jtd.2017.12.01>

On a recent visit to China, I was hosted by Dr. Jianxing He at First Affiliated Hospital of Guangzhou. I had recently met Dr. He at a meeting in Boston and was looking forward to reacquainting with him. We have had the good fortune of hosting one of his staff, Dr. Shuben Li. I was therefore acquainted with their work. Their unit is very busy performing 2,500 cases per year. More important is the quality of their work and the innovations they have introduced. The day of my visit to the hospital, I was warmly welcomed and giving an informative tour of their facilities. There were three cases set up specifically for that day to demonstrate a novel approach to Thoracic Surgery: tubeless thoracic surgery. I got to see firsthand a bullectomy, wedge resection and a right upper lobe carinal resection done as a uniportal video assisted procedure done with 3-D visualization. I was impressed with the efficient teamwork between anesthesia, operating room (OR) staff and surgeons. Each step was carefully choreographed. The operation was expertly done with success. While the surgery in itself was impressive, the tubeless anesthesia was remarkable. The patient was sedated and spontaneously ventilating resulting in a quiet operative field. Epidural anesthesia intercostal nerve blocks, vagus nerve block and topical lidocaine to the surface of the lung added to the anesthesia. Supplemental oxygen via laryngeal mask and high frequency catheter into the open thoracotomy was provided to maintain a steady  $PO_2$  of 80–90 throughout the operation. A constant  $PCO_2$  of 55–60 with a pH of 7.26–7.30 was also maintained throughout. All of this was confirmed

by arterial blood gases every 15 minutes. There were no emergencies throughout the procedure.

I commend the team in Guangzhou for developing this technique in a responsible way. It was first done with simple pleural and lung procedures. Once safety was demonstrated, they progressed to pulmonary resections, sleeve resection and now tracheal and carinal resections. They emphasize teamwork and careful patient selection. Patients must be fit, with few comorbid conditions, and generally not be obese. The stated advantages are avoidance of muscle paralysis, rapid recovery of patients, shorter ICU and hospital stays. There is also the sense that barotrauma and disruption of ciliary function are avoided. It remains for the Guangzhou team to provide indications, intraoperative data and postoperative outcomes to establish its routine role in thoracic surgery. Once these are established, the final step is to see if others can duplicate these results. Careful peer reviewed analysis will establish its role for the future. This is a bold step forward and further information and data will help identify its role in thoracic surgery.

## Acknowledgements

None.

## Footnote

*Conflicts of Interest:* The author has no conflicts of interest to declare.

Cite this article as: Mathisen DJ. Tubeless uniportal carinal right upper lobectomy. *J Thorac Dis* 2017;9(12):4941. doi: [10.21037/jtd.2017.12.01](https://doi.org/10.21037/jtd.2017.12.01)