



Commentary on the 2017 annual report of Shanghai Chest Hospital

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Provenance: This is an invited Commentary commissioned by Dr. Wentao Fang, MD, Executive Editor-in-Chief of Shanghai Chest (Department of Thoracic Surgery, Shanghai Chest Hospital, Shanghai, China).

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I have had the privilege of reviewing the annual report of thoracic surgery at the Shanghai Chest Hospital (1). The surgeons and hospital are to be commended on an outstanding report and impressive accomplishment in the area of thoracic surgery.

There has been impressive growth in all areas of thoracic surgery, decrease in mortality and an increase in minimally invasive procedures. The activities have been divided into specialized areas: Pulmonary surgery, esophageal surgery, mediastinal surgery, airway surgery, and transplantation. The Thoracic Department has been an innovator in the areas of lung transplantation, robotic and minimally invasive surgery for sleeve lobectomy and pneumonectomy. In 2016 the Thoracic Department performed over 10,000 thoracic operations with an overall mortality of 0.09%. This amazing total number of cases has steadily increased since 2011 when just over 4,000 cases were done. During this same time period, the overall mortality has gone from 0.3% to just under 0.1%. Of the 10,000 cases, over 7,000 were for lung malignancies! From 2009 to 2016, 688 cases of sleeve lobectomy were done with a peak of 180 in 2015 alone! At the same time, 78% of thoracic malignancy cases were performed by video-assisted thoracoscopic surgery (VATS) and 3% by robotic assisted techniques! Each of these approaches have seen steady growth since 2009.

The section of esophageal surgery performed over 500 resections in 2016 and has seen a steady increase per year since 2009 (185 cases). Induction therapy has been

integrated into the care of advanced esophageal cancer. Minimally invasive techniques including the use of robotic-assisted esophagectomy have become increasingly common with 233 VATS and 113 robotic procedures in 2016.

The sections of mediastinal and tracheal surgery have seen an equally impressive number of procedures performed. There were over 700 mediastinal procedures in 2016 up from 300 in 2008. There has been an increasing number of minimally invasive procedures as seen in the other areas. In the area of airway surgery, there has been an increase in number of cases with a peak of 47 in 2015.

As impressive as this report is, it could be strengthened and provide valuable insights for interested readers. How many surgeons perform surgery in the various areas? How many members are on a team and what level of training do they have? How many beds and ICU beds are dedicated to thoracic surgery? Could the authors explain what is responsible for the dramatic growth in all areas? Has it been the result of a more centralized approach to care in China where patients with certain diseases are sent to identified centers? Has Shanghai Chest Hospital created a network of referring hospitals? Is there another explanation? Has the increasing use of minimally invasive procedures been responsible?

The operative mortality has continued to drop. What can the authors share that explains this enviable trend? Is it specialized units, more experience, minimally invasive procedures or the use of guidelines?

Could the authors share morbidity and length of

stay data? It would add to the impressive results to see corresponding declines over the same time periods. In the area of esophageal resection, what is the anastomotic technique, leak rates, mortality and length of stay?

There is much to learn from the successes of the Shanghai Chest Hospital. This is an impressive level of accomplishment.

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Footnote

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References

1. Yao F, Wang R, Guo X, et al. Annual report of Department of Thoracic Surgery at Shanghai Chest Hospital. *Shanghai Chest* 2018;2:18.