Current and Evolving Surgical Strategies in Thoracic Oncology

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As in other areas of oncology, surgery is one of the main modalities of therapy in operable disease in thoracic malignancies. Integration with radiation and chemotherapy in the adjuvant and neo-adjuvant settings to achieve increased overall survival while minimizing the morbidity and mortality still remains a challenge. This integration of multimodal therapy is addressed in the management of esophageal carcinoma. Minimally invasive surgery for esophageal carcinoma has short term benefits over open surgery for resectable disease and comparable results [1, 2]. The controversy over trans-hiatal versus trans-thoracic approach remains unsolved with ‘guarded’ similar results [3]. While there was a claim of real increase in 5 year survival for three field lymphadenectomy in thoracic esophageal carcinoma [4], recent study did not show survival benefit by addition of cervical lymphadenectomy [5]. In any

case, the complications of esophagectomy are one touchy area and its management is important.

In an era of rapid change both in term of investigation and therapy, it is imperative that we do not lag behind. At the same time, we cannot lose focus on the disease or its natural history and the cost effectiveness of therapy. In this scenario, robotics has added a new dimension to the surgical armament. Used initially for urologic and pelvic procedures, it has now been extended to other areas. The first thoracoscopy was performed with a cystoscope in 1910 [6]. Currently, video assisted thoracic surgery (VATS) occupies a pivotal part in diagnosis and treatment of benign and malignant conditions. Over the years, the conversion rates from VATS to open surgery have decreased, while the long term survival is comparable to open surgery [7]. The other advantages include shorter hospital stay, lesser morbidity and increased tolerance to adjuvant chemotherapy [8]. The main advantages of robotic over VATS include three dimensional vision, four additional degrees of freedom, six additional directions of movements because of endo-wrist and a system enabled motion filter to eliminate tremors [7]. The initial results of robotic surgery match those of VATS [9, 10]. The current applications include treatment of mediastinal, lung and esophageal tumors. The former two are addressed in this issue. While it is necessary to adapt and incorporate new technologies, it is necessary to view these critically and impartially. Some claim lower health care cost with robotic surgeries [11] as the costing is done differently in different countries. In addition, different components of health care cost are valued differently across different nations. Concerns of robotic surgery include the finances to set it up as well as the recurring cost. This would be all the more important in underdeveloped and developing countries where it would be very exorbitant for the patient to bear it while neither the state nor the insurance meets the financial cost.

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