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Advanced Minimally Invasive Surgery Techniques in the Management of Oesophageal and Oesophago-gastric junction Malignancies

Abstract

Oesophageal cancer is one of the most aggressive malignancy worldwide with a 5-year survival rate of less than 25%. It is the fourth most common cause of cancer death in India. Surgery is the gold standard for treatment both for early-stage disease and for advanced disease after neoadjuvant therapy. Surgery of oesophageal cancer is probably one of the most demanding and challenging procedure which includes a radical R0 resection and comprehensive nodal dissection.

Open oesophagectomy is considered to be one of the most traumatic oncologic procedures. Morbidity and mortality are a major concern during the follow-up period because of the invasive nature of oesophagectomy and the complex operative procedures, dealing with wide areas of the neck, mediastinum, and abdomen. Long thoracic and abdominal incisions and one-lung ventilation during oesophagectomy are thought to be partly responsible for the high surgical invasiveness and subsequent respiratory complications of this procedure.

In an attempt to avoid extensive tissue aggression and reduce the high morbidity and mortality, the minimal invasive approach has been introduced. With the improvements in technology and instrumentation, as well as the surgeons' training in advanced minimally invasive procedures, the practice of this technique has shown to decrease the post-operative complications and speedy patient recovery without compromising on the oncological principles.

Oesophageal cancer incidence is quite high in Japan. Japanese surgeons are a front runner in advanced minimal invasive surgery skills including Video assisted thoracoscopic surgery (VATS) and Robotic assisted thoracoscopic surgery (RATS).

My key objectives would be to get exposed to advanced minimal invasive surgical techniques including complete thoraco-laparoscopic dissection, comprehensive extended two and three field nodal dissection and postoperative care in the management of oesophageal and oesophao-gastric junction cancer and replicate them in my institute to help in decreasing the postoperative respiratory complication and improve outcome. I would also like to learn endoscopic mucosal resection skills in the management of early oesophageal tumor.

The knowledge in advanced minimal invasive surgery will help us decrease the post-operative recovery time, improve care and reach out to more patients in high incidence regions of my country.