adverse events during NAC were 8/7/12/3 in the G1/2/3/4 respectively. Postoperative complications decided by Clavien-Dindo classification weren’t seen significant difference between two groups. Postoperative in hospital days were significantly shorter in group A.

Survival analysis showed significantly worse overall survival and disease-free survival in group A in both all cohort and matched cohort. The level of preoperative risk score was different between two different treatment strategies. Although this study has several limitations including low number population, difference of preoperative risk, and short follow up period, neoadjuvant therapy using FP may safely and effective treatment for elderly esophageal cancer patients.

301. LONG TERM RESULTS OF SINGLE AND MULTI-INCISION MINIMALLY INVASIVE ESOPHAGECTOMY (MIE) FOR TREATING ESOPHAGEAL CANCER: A PROPENSITY SCORE MATCHED STUDY

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Minimally invasive esophagectomy (MIE) is widely accepted as the standard treatment for esophageal cancer. It provides similar oncological outcomes with less pain and morbidity compared to open surgery. We first described MIE with single-incision both in the laparoscopic and thoracoscopic phase in 2015. Compared to multi-portal approach, short-term result showed comparable perioperative outcome with significantly reduced pain after surgery. With accumulated clinical experience, we compared our long-term follow-up result for single-incision MIE versus multi-incision MIE.

Patients with esophageal cancer, receiving MIE at our institute from 2008 to 2022 were included. 337 patients underwent single-incision MIE, while 467 patients received multi-incision MIE. Matching based on propensity scores produced 290 patients in each group.

The baseline characteristics between the two groups were similar after matching. Overall survival (OS) and progression free survival (PFS) were not compromised in single-incision MIE compared to multiple-incision MIE (5-year OS: 42.9% vs. 21.2%, p < 0.001; 5-year PFS: 35.1% vs. 17.1%, p < 0.001). The operation time was shorter (505.7 min vs. 562.4 min, p < 0.001). Single-incision MIE had larger mean number of dissected lymph nodes (45.6 vs 37.4, p < 0.001). There were no significant differences between the two groups in terms of short-term complications (single vs multi: 26.3% vs 15.9%, p = 0.196) and R1/2 rate (single vs multi: 11.5% vs 9.0%, p = 0.340).

Single-incision MIE is safe, feasible and effective for patients with esophageal cancer. Its long-term oncological outcomes are not compromised when compared to multiple-incision MIE, while its short-term perioperative outcomes are comparable to multi-incision approach. Three-dimensional imaging may play a role in higher quality oncological resection with more lymphatic clearance for single-incision MIE compared to multiple-incision MIE.

302. PATIENT SPECIFIC AUGMENTED REALITY IN EXTENDED ROBOTIC ESOPHAGUS RESECTION FOR TYPE II GASTRO-ESOPHAGEAL JUNCTION ADENOCARCINOMA

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For several procedures augmented reality (AR) allowed surgeons to work by the realtime visual feedback of the surgery field during lockdown by the COVID-19 pandemic. Integrating AR into medical practice could play a key role for the improvement of the learning curve and lower the costs. Also renovate the educational model with one consensus regarding the financing of medical specialist degree.

A global surgical model has not yet been achieved for type II adenocarcinoma of the gastro-esophageal junction (GEJ), while its incidence increases worldwide. Controversies exist about the type of resection. Minimally invasive surgery provides magnified anatomy that enables to perform dissection at the appropriate planes. This technique has made possible the standardization of surgery by ‘concentric-structured model’ for cancers arising in the middle part of esophagus. A patient specific model for GEJ will be conducted using the data of surgeries applied to the real anatomy with AR. The validity will be investigated, conforming the images.

Dutch single-center cohort study have demonstrated that after gastrectomy a positive margin was more common. While, esophagus resection provided a more complete lymph node dissection. The CARDIA trial has shown that one of the strongest independent prognostic factors is the presence of metastatic lymph nodes. Importantly, patients with positive upper mediastinal lymph nodes had a poorer prognosis. Related to this, German group have shown feasibility and superiority of a fully robotic surgery allowing a highly controlled lymph node dissection. Also, Korean study reported favorable outcomes of full four-arm robotic compared to robotic surgery combined with open abdominal surgery.

The increasing incidence of GEJ cancers, the different approaches and emerging new minimal invasive and robotic approach need a comprehensive anatomy concept of the type II GEJ. By having a global concept of surgical anatomy, surgery procedures can be performed consistently and standardized worldwide.

303. A NOVEL ‘WATERFALL METHOD’ OF FILLING THE POSTERIOR MEDIASTINAL CAVITY AFTER ESOPHAGECTOMY USING OMENITAL FLAP IN RETROSTERNAL GASTRIC TUBE RECONSTRUCTION

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Post-esophagectomized mediastinal dead space can cause not only mediastinal abscess in R2 resection, but also airway trouble in salvage surgery or combined resection of the airway system due to intra-thoracic great pressure fluctuations. Therefore, dead space filling is critical to prevent them. Dead space is filled with an omentum pulled up in posterior mediastinal...