A NOVEL "TOP DOWN" MEDIASTINOABDOMINAL DISSECTION FOR GIANT COMPLEX PARAESOPHAGEAL HERNIA (GPEH)

Akshay Pratap, MD[1]; Brandon Kassel[2]; [1]University of Colorado Anschutz Medical Center; [2]Colorado State University

Background: Giant paraesophageal hernia (GPEH) is a rare variant of PEH which are challenging to repair. Conventional dissection for hernia repair is begun at the hiatus by creating a retro esophageal window. However, a large retro esophageal fat pad or organ herniation can make creating of this dissection plane extremely difficult and can result in organ injury. The aim of the technique is to simplify and facilitate ease and safety of dissection.

Methods: This is a retrospective review with prospective follow up who underwent top down Mediastinoabdominal dissection and repair of GEPH between 2018 and 2021 by a single surgeon. GPEH was defined as hernia >8cm, upside down stomach or >80% of intrathoracic stomach. After dissecting and reducing the mediastinal hernia sac esophagus is identified and encircled with a Penrose drain high up in the mediastinum at the level of inferior pulmonary vein. Subsequent dissection is continued in a caudal direction which allows reduction of hernia contents back into the abdomen with ease as the dissection continues.

Results: Fifteen patients underwent the described technique for repair of GPEH. All procedures were completed laparoscopically (n=5) or robotic (n=10). Mean operating time was 170 min. There were no intraoperative or postoperative complications or injuries. Patients had a short post-operative length of stay (mean of 2 days) and no 30-day readmissions. At 2 years of follow-up, there have been no recurrences or long-term complications. GERD-health-related quality of life (HRQL) scores averaged 6 (range, 0-12, of a possible 50), indicating little reflux symptomatology. Follow-up upper GI series were obtained in 11 cases and showed intact repairs.

Conclusion: Top down Mediastinoabdominal dissection allows ease of dissection in the mediastinum and overcomes the major challenge for the surgeon to create a retro esophageal window at the hiatus where planes of dissection can be concealed by a large herniation of organs or fat pad. This technique results in shortened operative time and overcomes risk of organ injury which can be seen with the conventional technique.

