LAPAROSCOPIC RESECTION OF GASTROINTESTINAL STROMAL TUMORS NEAR GASTRO-ESOPHAGEAL JUNCTION
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Introduction
Organ preservation is a cornerstone in the surgical removal of gastro-intestinal stromal tumors (GISTs). Laparoscopic surgery and the current surgical technology have enabled the same in the management of GISTs near gastro-esophageal junction (GEJ), without the need of a total gastrectomy.

Methods and Procedures
This is a retrospective analysis from a prospective database of consecutive patients who were diagnosed to have GISTs located near GEJ (GEJ GIST) during last twelve years and underwent resection for the same by a single surgeon (SG). GEJ GISTs were defined as those with an upper border within 5 centimeters of esophago-gastric (EG) line. Clinico-pathologic details, intra-operative course, short and long term outcomes were analyzed.

Results
A total of nine patients were planned for the laparoscopic resection of GEJ GISTs. All the procedures were completed laparoscopically without any intra-operative complications. The patients were positioned in a supine leg-split position and port position is as shown in the figure above. Wedge resection was the most common method employed for resection. Two patients undergoing wedge resections also had to undergo a Toupet fundoplication in view of a close proximity to GEJ. All patients had an esophageal bougie placed during resection to ensure the patency of GEJ. There were no short-term complications in any of the patients.

Techniques:
Wedge resection
Eversion technique: For tumors located in the proximal lesser curvature. A gastrotomy is made distally with a gross negative margin of normal mucosa about half the length of the circumference of the tumor. Meticulous dissection is done around the lesion to avoid esophagogastric line damage.
Intra-gastric approach: Done via an anterior gastrotomy approach. Posterior wall tumor is lifted and stapled transected.
Follow-up: All patients were kept under regular follow-up in collaboration with a medical oncologist. A total of three patients with intermediate/high risk tumors were kept on adjuvant imatinib therapy. One patient did not tolerate the therapy and is recurrence free at 9 months follow-up. One of the patients with intermediate risk disease presented with a solitary omental metastasis at one year four months follow-up which was resected following 3 months of imatinib therapy and showed myoid degeneration. He is recurrence free at ten year follow-up. There was no evidence of recurrence in any other patient.
A 43 years old patient with a locally advanced GEJ GIST from high lesser curve of stomach with infiltration into adjacent undersurface of liver, body of pancreas and celiac vessels, and a solitary liver metastasis. After a >1 year course of imatinib therapy, he underwent wedge resection of the tumor with lesser curve reconstruction and resection of liver lesions.

Discussion
GISTs are the most common mesenchymal tumors in the gastrointestinal tract. Resection with a grossly negative margins is the gold standard treatment for these tumors. The tumors near the GEJ impose the challenge of local resection with a possible compromise in GEJ function and patency. Moreover, the access to this region is compromised in an open surgery. With the increased use of laparoscopic surgery, there has been a surge in the management of this subset of patients in a minimally invasive fashion. The largest series published till date is from Chinese centers with 42 and 25 patients respectively (1, 2).

Conclusion
Laparoscopic resection for GEJ GISTs is safe and feasible. The technique of resection utilized must be based on tumor factors and the surgeon’s experience.

References: