

Minimal Access Surgery for the Treatment of Gastric Gastrointestinal Stromal Tumours – A Single Centre Experience

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Abstract

Introduction: Laparoscopic techniques have been increasingly adopted in the field of General Surgery in the last decades. The main disadvantages of laparoscopy are related to limited degrees of freedom of instruments and poor ergonomics, which are associated with a steep learning curve. Robotic surgery overcomes most of the technical limitations of laparoscopic surgery and has the potential to expand the indications of minimal access surgery (MAS) in procedures that are difficult to perform using laparoscopy.

Methods: Patients who underwent MAS resections of gastric gastrointestinal stromal tumours (GIST) between January 2002 and October 2018 in a single Surgical Department were retrospectively analysed. Demographic data as well as the following characteristics were recorded for each patient: age, sex, symptoms, tumour location and size, type of surgical procedure, intraoperative blood loss, operative time, length of hospital stay, histopathological assessment of resection margins, and incidence of perioperative complications.

Results: The mean patient age was 58 (range, 27-81 years). Most lesions were found on the great curvature (7) and in the distal stomach or antrum (7), respectively. Twenty patients underwent laparoscopic resection, while five patients had robotic resection of gastric GISTs. Surgical laparoscopic treatment consisted of antrectomy (n=4) and wedge gastrectomy (n=16). In all robotic cases a wedge gastrectomy was performed. One patient was converted to open surgery due to adhesions from previous operation. The mean operative time was 130 minutes (range, 70-210 minutes). The mean tumour size was 3.8 cm (range, 2-7 cm). There were no complications except one case that required reoperation for postoperative bleeding. There were no mortalities.

Conclusion: The MAS approach of gastric GISTs is safe and effective and it is associated with low morbidity. Therefore, it should constitute the first option in patients with small tumours and favourable locations. The only limiting factor for the widespread use of MAS resections for gastric GISTs is surgeon expertise in this challenging technique.

Key words: gastric gastrointestinal stromal tumour, laparoscopic gastrectomy, wedge resection, robotic surgery