



Minimally invasive approach in gastrointestinal stromal tumors

Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal malignancy of the gastrointestinal tract. The discovery of the mutation in the cKIT tyrosine-kinase and the advent of imatinib-mesylate to target this mutation dramatically improved the prognosis of patients diagnosed with GISTs. Nevertheless, surgical resection remains the cornerstone of treatment in patients with localized disease, and radical resection with negative margins and without tumor rupture is the goal of surgery.

Thirty years after the first laparoscopic resection of a gastric GIST (1), the minimally invasive approach to these tumors has increasingly gained consent among surgeons. Indeed, according to current guidelines (2,3), minimally invasive approaches (i.e., laparoscopic, endoscopic, and robotic) for resection of gastric GIST are suggested for smaller tumors of favorable anatomic locations in referral centers with appropriate experience. More recently, the use of minimally invasive techniques has been proposed also for larger gastric tumors and in extra-gastric locations, and their application in the surgical treatment of GISTs is likely to become wider in the future.

Moreover, the introduction of tyrosine-kinase inhibitors and their use in the preoperative setting, by reducing the volume of the tumor, could make minimally invasive approaches more feasible and safer, beyond the possibility to perform less mutilating surgery with the same oncologic result.

However, some issues are still a matter of debate, especially for GISTs located in anatomically unfavorable sites, such as the esophagus or the rectum: balancing the best oncological result with organ preservation is of crucial relevance in the management of these cases.

In this special series, the authors make an update on the state of the art and open debates in the treatment of GIST. Minimally invasive approaches to non-gastric GISTs are discussed, considering both the technical aspects of the procedures and the oncologic outcomes derived from existing literature (4-6). A narrative review describes the definition and the role of surgical margins in GIST and explores the clinical relevance of minor and major tumor ruptures (7). Finally, an overview on multimodal treatments and new drugs for the management of different stages of disease evidences the necessity of a multidisciplinary approach and of a biology-driven strategy (8).

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