COMPARISON OF SAFETY AND OUTCOMES BETWEEN ENDOSCOPIC AND SURGICAL RESECTIONS OF SMALL (≤5 CM) PRIMARY GASTRIC GASTROINTESTINAL Stromal TUMORS

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Background and aims: Endoscopic resection is increasingly performed for gastric gastrointestinal stromal tumors (GIST). However, the safety and long-term outcomes remain elusive. We aimed in this retrospective study to compare operative complications and prognosis between endoscopically resected GIST in size of ≤5 cm and the surgically resected one.

Methods: In this single-center retrospective study, we compared demographics and clinical outcomes including operative complications postoperative courses, and the R0 resection rate between the endoscopy (n=268) and surgery (n=141) groups. Only GIST tumors in size of ≤ 5 cm were recruited for this comparison study.

Results: Overall, the mean age of patients was 59.0 years (range: 31.0-83.0). The male-female ratio was 0.68. The most common site of GIST was, in a descending order, the gastric fundus (55%), corpus (27.6%), cardia (10.8%), antrum (6.6%). Compared with the surgery group, GIST tumors in the endoscopy group was significantly smaller (1.69±0.9 cm, compared to 3.20±1.2 cm in the surgery group; P<0.001) in size, shorter postoperative hospital stay (4.66±1.5 days, compared to 8.11±5.0; P<0.001), shorter time to first fluids diet (1.94±1.1 days, compared to 4.63±2.6; P<0.001), fewer incidence of operative and post-operative complications (p<0.05), and lower hospital costs (20115.4±5113.5¥ compared to 43378.4±16795.7¥; P<0.001). The R0 resection rate was significantly lower in the endoscopy (93.3%) than in the surgery (99.3%) groups (P<0.01). In the endoscopy group, 176 (65.7%), 69 (25.7%), 14 (5.2%) and 9 (3.4%) patients were found to be very low, low, intermediate, and high risk, respectively. In contrast, 27 (19.1%), 87 (61.7%), 14 (10.0%), 13 (9.2%) patients were found to be very low, low, intermediate, and high risk in the surgery group, respectively. The risk stratification was significantly different between the endoscopy and surgery groups (P<0.01). Among 409 cases, 50 (12.2%) patients were found to be intermediate or high risk. Among 50 patients, only 20 patients received adjuvant therapy with imatinib after resection. Seven of the 20 patients took imatinib 1 to 3 months because of its side effects and high costs. However, during 33.5 months of follow-up, no local or distant tumor recurrence was observed, and two patients were died owe to other disease in surgery group.

Conclusions: Endoscopic resection of selected gastric GISTs (≤5cm) is feasible and safe and is associated with a better intraoperative outcome and an equal postoperative course compared with surgery group.