

The Efficacy of Endoscopic Treatment of Gastric Stromal Tumors and Its Prognostic Factors

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Objective: To explore the actual effect of endoscopic treatment of gastric stromal tumors and its prognostic factors. **Methods:** A total of 60 patients with gastric stromal tumors who were admitted to our hospital from January 2018 to January 2019 were selected. They were divided into 2 groups according to the admission order, 30 cases each. The control group underwent conventional laparotomy, and the observation group underwent endoscopic treatment. The surgical indicators, recovery time, clinical efficacy, and complications were compared between the two groups. **Result:** All the surgical indicators in the observation group were better than those in the control group ($P < 0.05$), and the recovery time of the observation group was better than the control group ($P < 0.05$). The total incidence of complications in the group was lower than that in the control group ($P < 0.05$). **Conclusion:** Endoscopic treatment of gastric stromal tumors does have exact results, and the patients have good prognosis, fewer complications, high safety, and high clinical value.

Key words: Endoscope; Gastric stromal tumor; Clinical efficacy; Prognostic effect; Surgical indicators; Recovery time; Complications

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Gastric stromal tumors are a type of tumor-like lesions that occur in the gastrointestinal mesenchymal tissue. They are also invasive tumors with a malignant development trend, and they mostly occur in the stomach of patients. The disease has few specific symptoms in the clinic¹, the course can be short or long, up to 20 years, and the pathological expression of gastric stromal tumor is benign without significant manifestations in early stage, while the course of malignant is relatively short. The disease is mostly characterized by gastrointestinal bleeding², but it is difficult to distinguish and easily confused. The lesions in the cardiac position of the patient will cause symptoms of swallowing discomfort. In severe cases, ulcers or even perforations can occur, which seriously endangers the patient. Life is healthy. At present, the clinical treatment measures for gastric stromal tumors are mostly surgical. The primary purpose is to remove R0 (general resection under the endoscope), and lymph node metastasis will not occur due to diseased tumors.³ This method can

cause tumor rupture in patients, and then cause abdominal cavity implantation. Endoscopic surgery has the advantages of better recovery and fewer complications. It has greater application value and obvious advantages compared to the former⁴. In view of this, this article explores the actual efficacy of endoscopic treatment of gastric stromal tumors and its influential factors for patient prognosis, the report is as follows.

MATERIALS AND METHODS

General Information

A total of 60 patients with gastric stromal tumors who were admitted to our hospital from January 2018 to January 2019 were selected. They were divided into 2 groups according to the admission order, 30 cases each. There were 16 males and 14 females in the control group, aged 41 to 65 years, with an average age of (59.81 ± 1.98) years, a course of 2.8 months to 1.8 years, an average course of disease (12.27 ± 0.84) years, and

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an average tumor diameter of 3.6 to 8.9 cm. The average diameter was (6.54 ± 0.35) cm. The tumor location was classified into 6 cases of gastric antrum, 12 cases of gastric body, 12 cases of gastric fundus, and classification: 13 cases of intraluminal type, 5 cases of extraluminal type, and 12 cases of interwall type. In the observation group, there were 18 males and 12 females, aged 52 to 67 years, with an average age of (59.14 ± 1.77) years, a course of 1.6 months to 7.5 years, an average course of disease (2.64 ± 0.64) years, and an average tumor size of 4.5 to 9.7 cm. The average diameter was (5.97 ± 0.84) cm. The tumor location was classified into 5 cases of gastric antrum, 11 cases of gastric body, 14 cases of gastric fundus, and classification: 15 cases of intraluminal type, 6 cases of extraluminal type, and 9 cases of interwall type. The data of the two groups were comparable ($P > 0.05$).

Inclusion and exclusion criteria

Inclusion criteria: (1) After ultrasound, endoscopy, immunological measurement, and histopathological diagnosis, they all met the "Chinese Expert Consensus for the Standardized Surgical Treatment of Gastrointestinal Stromal Tumors (2018 Edition) [J]"⁵. (2) > 18 years of age; (3) No lymph node metastasis and distant displacement were found by CT abdomen measurement before operation; (4) No severe organic disease; (5) Those who meet the relevant indications for surgery; (6) The clinical data are available, and there is no withdrawal during the study; (7) The patient and family members are informed and agree. Exclusion criteria: (1) Severe heart, liver, kidney, lung and other organ and nervous system dysfunction diseases, or patients with other types of malignant tumors, infectious diseases, immune diseases; (2) Patients with hormone dependence and acute myocardial infarction; (3) Women during pregnancy, those who are in labor or lactation; (4) Existence of gastrointestinal failure such as gastrointestinal bleeding, esophageal cancer, significant gastrointestinal pain, enteritis, emphysema, and other types of stomach (5) People with a history of cardiovascular, endocrine, hematological dysfunction, and liver disease; (6) Patients with a previous

history of radiotherapy and chemotherapy; (7) Serious systemic symptoms, worsening of the plot, and disturbance of consciousness during treatment or observation; (8) Patients with abnormal blood tumor detection indicators; (9) Patients who could not cooperate with follow-up for more than 6 months.

Method

The control group underwent laparoscopic treatment, specifically: the patient was supine, given tracheal intubation and general anesthesia treatment, and after anesthesia effect was satisfactory, he was disinfected with drapes, and the pneumoperitoneum was established by the five-hole method, which was set to about 12.10mmHg. If the location of the body lesion is not clear, methylene blue injection combined with gastroscopy can be used to determine the location of the lesion, and then a segmental partial gastrectomy is performed to reconstruct the digestive tract. The observation group underwent endoscopic treatment, specifically: taking the left lying position, performing tracheal intubation and general anesthesia, when the anesthesia effect was sufficient, gastroscopy was performed to determine the specific location of the lesion, and a dual knife was used to mark the circle around the lesion. Injecting masses with blue, epinephrine, and saline indicated a mucosal area, and a fluid pad was established. Cut the mucosa of the lesion with a Dual knife, and separate the sub-membrane tissue at the edge. If the lesion is too deep, remove the full thickness of the gastric wall. After removing the tumor, remove the tumor. Observe the remaining tumor tissue and capsule, and close the incision. open. Pathological examination was performed on related samples after operation.

Observation standards

(1) Surgical indicators: Observe and record relevant index data during the operation, including the length of the operation and the amount of bleeding during the operation, and observe whether the tumor is completely resected after surgery and record the resection rate.

(2) Recovery time: The average hospitalization

time, first meal time, and normal time of gastrointestinal function were recorded during the follow-up review and follow-up at 6 months.

(3) Clinical curative effect: The curative effect is divided into three stages, which are markedly effective: the patient's upper abdominal pain and discomfort, abdominal distension and acid reflux, and other digestive tract-related symptoms completely subsided, the tumor was completely removed, the lesions and ulcers disappeared, and digestive ability was improved. Eating: Effective: Patients with abdominal pain and discomfort and gastrointestinal symptoms such as abdominal distension and acidity have improved, tumor resection is basically complete, lesions and ulcers have been reduced, and digestive capacity has been improved. Ineffective: After treatment, patients with abdominal pain and discomfort and abdominal distension Acid-related digestive tract symptoms did not regress or worsen, tumor resection was incomplete or even ruptured, lesions and ulcers remained, and gastric mucosa was poor.

(4) Complications: Follow-up observation was performed for 6 months after treatment to record the occurrence of complications after treatment, including: postoperative recurrence, peritonitis, ulcer perforation and other symptoms, and the total incidence after treatment was recorded.

Statistical methods

The statistical software SPSS19.0 was used to process the data. "Mean \pm SD" represents measurement data and t test; rate (%) indicates count data and x2 test. $P < 0.05$ was considered statistically significant.

RESULTS

Comparison of surgical indicators between the two groups

All the surgical indicators in the observation group were better than those in the control group ($P < 0.05$), as shown in Table 1.

Table 1. Comparison of surgical conditions between two groups of patients			
Group	n	Bleeding volume (ml)	Operation time (min)
Observation group	30	19.46 \pm 1.36	61.36 \pm 8.43
Control group	30	192.46 \pm 61.62	118.42 \pm 7.27
T/X2	-	16.032	8.394
P	-	0.000	0.000

Observation group	30	50.56 \pm 18.36	61.36 \pm 8.43	100% (30/30)
Control group	30	192.46 \pm 61.62	118.42 \pm 7.27	80.00% (24/30)
T/X2	-	16.032	8.394	14.275
P	-	0.000	0.000	0.000

Comparison of recovery time between the two groups

The indicators of recovery time in the observation group were better than those in the control group ($P < 0.05$), as shown in Table 2.

Table 2. Comparison of recovery time between the two groups [n (%)]				
Group	n	Average length of hospital stay (d)	First meal time (d)	Gastrointestinal function returns to normal time (d)
Observation group	30	6.56 \pm 1.36	1.40 \pm 0.42	2.48 \pm 0.75
Control group	30	10.46 \pm 1.62	3.62 \pm 1.11	4.43 \pm 1.22
T/X2	-	16.032	2.323	2.775
P	-	0.000	0.023	0.007

Comparison of clinical efficacy between the two groups

The total effective rate of treatment in observation group was higher than that in control group ($P < 0.05$), see Table 3.

Table 3. Comparison of the total effective rate of treatment between the two groups [n (%)]				
Group	n	Markedly effective	Effective	Invalid
Observation group	30	19 (63.33)	10 (26.67)	1 (10.00)
Control group	30	15 (60.00)	8 (26.67)	7 (23.33)
X2	-	-	-	-
P	-	-	-	-

Comparison of complications between the two groups

The total incidence of complications in the observation group was lower than that in the control group ($P < 0.05$), as shown in Table 4.

Table 4. Comparison of the total incidence of complications between the two groups [n (%)]				
Group	n	Postoperative Peritonitis	Perforated	Total
Observation group	30	1	0	1 (3.33)
Control group	30	7	0	7 (23.33)
X2	-	-	-	-
P	-	-	-	-

		recurrence		ulcer	incidence rate
Observation group	30	0 (0.00)	1 (3.33)	1 (3.33)	2 (6.67)
Control group	30	2 (6.67)	4 (13.33)	2 (6.67)	8 (26.67)
X ²	-	-	-	-	4.320
P	-	-	-	-	0.037

DISCUSSION

Gastric stromal tumors are a class of mesenchymal cancer lesions that are more common in the digestive tract ⁶. They have a certain tendency to malignant transformation, and the changes are more closely related to tumor volume ⁷. Most of the early and benign lesions of gastric stromal tumors have no exact clinical symptoms, and they are mostly detected by gastroscopy and expressed as gastrointestinal bleeding. ⁸ Development, the early detection rate of gastric stromal tumors has improved, but it is still easy to be confused with other diseases ⁹, so early diagnosis and early treatment of the disease are of critical significance to the final treatment outcome of patients ¹⁰. At present, the clinical practice of gastric interstitial resection is mostly performed by surgical laparotomy, and it can be observed whether the complete resection is effective and curative, but it has poor localization of the lesion and is prone to tumor metastasis during surgery ¹¹. The endoscopic technique has the same characteristics as the previous operation, with accurate curative effect and few complications. It can accurately locate the lesion and remove the tumor completely. This study has achieved ideal results with endoscopic treatment ¹⁸.

In the results of this study, all the surgical indicators in the observation group were better than those in the control group, indicating that the endoscopic surgical treatment method has the exact surgical efficiency and can effectively improve the bleeding situation and the duration of the operation. The reason is that surgical resection is performed on gastric stromal tumors, especially tumors with a diameter of less than 5 cm. The traditional open abdominal resection has defects such as large intraoperative blood loss and large wounds ¹², causing damage to the patient's body. Large, and then affect the prognosis recovery effect.

The endoscopic resection of tumors, as a type of minimally invasive surgery, has the advantages of low trauma and high efficiency. Compared with the previous surgery, the resection completion rate is higher, but it has certain difficulties. Fine requirements are high ¹³. In the results, the indicators of the recovery time in the observation group were better than those in the control group. According to the analysis, endoscopic treatment can preserve the mucosa to the greatest extent after the complete lesion resection during the operation ¹⁴, which has a positive effect on improving the prognosis of patients. In addition, endoscopy is a minimally invasive technique with low trauma to the body and low complications. It is characterized by high safety and low bleeding. Patients have high acceptance of this type of surgery, so the prognosis is good, which effectively promotes the recovery rate.

In the results of the study, the total effective rate of treatment in the observation group was higher than that in the control group, indicating that endoscopic treatment has a significant effect on gastric stromal tumors. The size of a tumor can effectively reflect its prognosis and biological characteristics. The larger the size, the higher the malignancy, and the higher the risk of distant metastasis. This study uses gastroscopy to perform a safer operation during observation. Can effectively avoid tumor damage ¹⁵, leading to metastases, and effectively guarantee the efficacy of surgery. The effective rate was 96.67% (29/30), confirming that the endoscopic surgery is effective. In the study results, the overall incidence of adverse reactions in the observation group was lower than that in the control group, only 6.67% (2/30). The reason is that the complications associated with endoscopic surgery in this study are mostly pneumoperitoneum ¹⁶, But after treatment can effectively obtain relief, and can protect the patient's body to the greatest extent, the risk of postoperative complications is low, with features such as low side effects, effectively improve the prognosis of patients, high safety. In addition, before endoscopic treatment, it should be noted that this operation is a type of surgical resection that cannot perform lymphatic cleansing ¹⁷. Therefore, ultrasound gastroscopy should be used

to take relevant measurements of the surrounding tissue before the operation to detect whether the lymph nodes are enlarged. In order to avoid metastasis of peritoneum, abdominal cavity and other parts caused by incomplete resection.

CONCLUSION

In summary, endoscopic therapy is a type of surgical procedure with significant therapeutic effects, with advantages such as good recovery and fewer complications, and has great promotion value.

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