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SURGICAL TREATMENT OF MYXOMA OF THE STOMACH: A CASE REPORT

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Plexiform angiomyxoid myofibroblastic tumor of the stomach is a rare mesenchymal tumor that was first described in 2007. The tumor is very rare and for nowday, no more than 115 cases, confirmed by immunohistochemical studies, have been described in the literature. The age of patients with myxoma of the stomach ranges from 7 to 75 years. The disease is equally common among men and women, manifests itself in the form of ulcers of the gastrointestinal tract mucosa and is accompanied by arrosive bleeding. Tumors in all cases are localized in the antrum of the stomach, represent a lobular submucosal or transmural mass with a low potential for malignancy. Currently, there is no information in the world literature about the recurrence and distant metastasis of myxoma of the stomach. This article presents a clinical observation of a patient with myxoma of the antrum of the stomach with severe concomitant pathology, in connection with which surgical endoscopic treatment was performed. The positive results of the performed treatment indicate the high efficiency of endoscopic submucosal resection of the gastric myxoma.

Keywords: myxoma of the stomach, endoscopic submucosal tumor resection.

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Introduction. Plexiform angiomyxoid myofibroblastic tumor (PAMT), also known as plexiform fibromyxoma, was first described in the early 21st century by Y. Takahashi [9]. This rare tumor of mesenchymal origin is considered a benign tumor according to the WHO classification of Tumors of the Digestive System (2010). PAMT is characterized by spindle cells, plexiform growth pattern and abundant myxoid capillary rich extracellular matrix [10, 11]. The size of PAMT of the stomach ranges from 19 mm to 150 mm, with a mean value of 63 mm [3]. Most commonly symptoms include abdominal discomfort and pain, nausea, vomiting, pyloric stenosis, and weight loss. For 2016 year, the literature provided information on 59 morphologically verified cases of PAMT [6], by 2019 the total number of patients with this pathology reached 113 [8], and in 2020 single cases of the disease were additionally described [5]. The most common problem in clinical practice is the differential diagnosis between PAMT and gastrointestinal stromal tumors (GIST), since, despite similar clinical manifestations, these neoplasms has differences in prognosis [1]. In this situation, with an unclear histological view, the final diagnosis is made on the immunohistochemical analysis of mutations in the KIT and PDGFRA genes [2], which allows confirming plexiform fibromyxoma [7].

In this study we report a rare case of myxoma of the stomach that was initially suspected as GIST. A 61-year-old male patient presented to the Cancer Research Institute (Tomsk) for further evaluation of the lesion suspected as gastrointestinal stromal tumor. In September, 2020, the patient experienced abdominal discomfort, nausea and hematemesis. Since June 2020, he was under the supervision of a cardiologist with a diagnosis of acute myocardial infarction with damage to the anterior lateral wall of the left ventricle, NYHA IIA heart failure. Gastroscopy revealed a submucosal mass measuring approximately 25 mm in diameter at the lesser curvature of the gastric antrum, with an elastic structure and actively bleeding granulations (Figure 1). Tumor biopsy was not performed due to the risk of bleeding.

The additional examination including endoscopic ultrasound of the lesion, chest X-ray, CT of the abdominal organs and ultrasound of the pelvic cavity revealed no signs of synchronous tumors and metastatic lesions of target organs. Based on the examination, a clinical diagnosis was suspected to be GIST of the angle of the stomach, Gr I $T_1N_0M_0$. Due to severe cardiovascular disease, gastric resection was contraindicated and, therefore, endoscopic

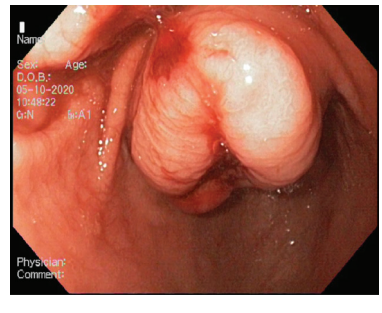

Fig. 1 – Endoscopic image of myxoma of the stomach

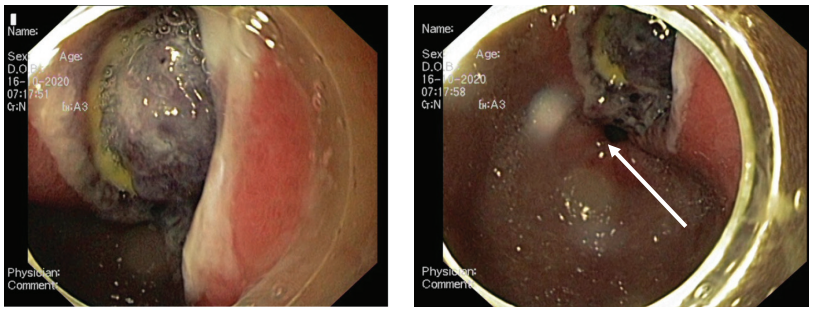

Fig. 2. (A, B). Endoscopic submucosal dissection procedure. Intraoperative endoscopic images after tumor excision. The mucosal defect is 30 mm in diameter. The bottom of the ulcer is confined by the muscle layer of the stomach. The arrow indicates the pyloric canal

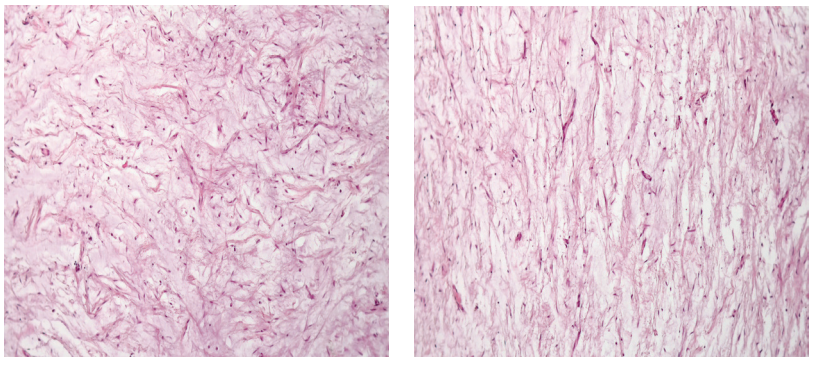

Fig. 3. (A, B). Pathological evaluation of mixoma of the stomach. Microscopic evaluation (hematoxylin and eosin staining, x200)

treatment was offered to the patient. Subsequently, the patient underwent endoscopic submucosal dissection for gastric lesion in PEMR ESD modification (fig. 2).

The postoperative course was favorable without any complications. Oral feeding was initiated on day 2 after surgery; restoration of the gastrointestinal tract motility occurred on day 3 after surgery; and the patient was discharged from the hospital on day 4 after surgery. Pathological examination of the resected specimen revealed plexiform growth of spindle cells with oval nuclei and eosinophilic cytoplasm separated by abundant myxoid stroma rich in small blood vessels. The histological conclusion was myxoma of the stomach with no mucosal invasion. Resections margins were histologically tumor-free (fig. 3).

Thus, the final clinical diagnosis was myxoma of the stomach complicated by ulceration and bleeding. The patient underwent endoscopic dissection of submucosal lesion in the gastric antrum using PEMR ESD technique (October, 2020). At 2-months follow-up, the esophagogastroduodenoscopy showed a scar in the gastric angle, measuring approximately 13 mm in the length. No evidence of inflammation and recurrence was found.

Conclusion. We have reported a case of myxoma of the stomach, a rare mesenchymal gastric tumor that requires differential diagnosis from GIST and other mesenchymal tumors of the stomach. The final diagnosis of myxoma of the stomach is only made after pathological evaluation of endoscopically resected specimen. Endoscopic electroresection is a treatment option for patients not suitable for radical resection because of severe concomitant diseases.

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