CASE REPORT

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Long-Term Untreated Glomus Tumor of the Stomach

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ABSTRACT Glomus tumor was first described by Barre and Manson in 1924. The classic localization of glomus tumor is the subungual region of digit but it may occur in anywhere in the body especially in skin, soft tissue, nerves, stomach, trachea, and liver. Glomus tumor is rarely seen in gastrointestinal tract.Most of them are incidentally diagnosed. Gastrointestinal stromal tumors should be in differential diagnosis. We present a case followed up for a long time without treatment.

Keywords: Glomus tumor, stomach

The first case of glomus tumor was reported in 1951.[1] Glomus tumor of the stomach is located in the submucosa or muscularis propria layer of the gastric wall. Common symptoms are dyspepsia, epigastric pain, upper gastrointestinal bleeding.[2] Most of glomus tumors are asymptomatic and incidentally diagnosed.[3] In this case; we report a patient who was incidentally diagnosed and followed up for a long term with untreated glomus tumor of the stomach.

CASE REPORT

We present a 38 years old male patient. He has no medical history. During health screening, abdomen ultrasonography showed that there was a 10x5 cm pseudocystic lesion in the pancreas tail. The patient was referred to general surgery for further examination. Pyhsical examination was normal. Routine laboratory investigations were within normal limits. Computed Tomography (CT) imaging showed a 95x45 mm lesion which had lobulated contours and mural calcification, originated from the gastric wall and had a necrotic central part (Figure 1, Figure 2). Preliminary diagnosis was gastrointestinal stromal tumor (GIST). Upper gastrointestinal endoscopy revealed a polypoid, well bordered, submucosal lesion at the gastric corpus. The pathological diagnoses of the biopsy were chronic gastritis with negative Helicobacter pylorii. Surgical excision was recommended but patient rejected the treatment and didn't come to his control examinations for 3 years because he hadn't any symptom. When the patient came for control after 3 years, CT imaging showed the same lesion, same size and patient was still asymptomatic. Exploration of the abdomen reveals 9 cm, cystic lesion, originated from gastric serosa at the antrum. The tumor was dissected and liberalized with safe surgical borders, the wedge resection of the stomach was performed. The early postoperative period was normal, there was no complications and patient was discharged at 5th day after surgery. Pathologic investigation revealed ''epithelioid and spindle cell mesenchymal tumor, in the foreground glomus tumor'' at the posterior gastric wall in submucosal layer. The surgical borders were negative for tumor. Tumor cells strongly positive for SMA, vimentin, and caldesmon but nega-

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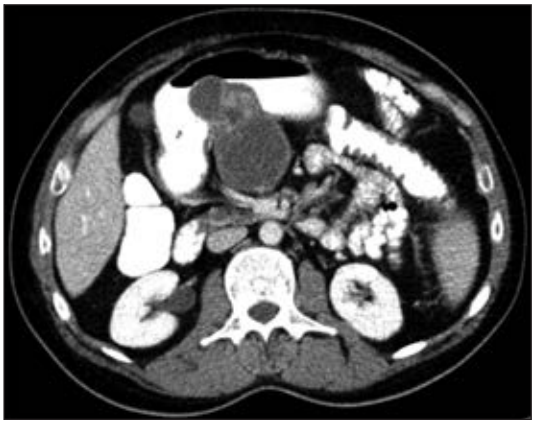

FIGURE 1: The tumor originating from posterior gastric wall (white arrows).

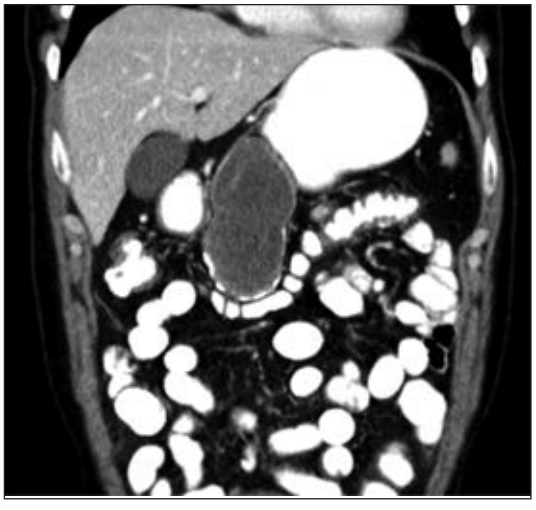

FIGURE 2: Peripheric calcifications (coronal section).

tive for CD34, Factor8, ERG, HHV8, HMB45, CD117 and S100. Ki-67 proliferation index was %11. We decided to follow the patient with short periods after surgery, at our multidisciplinary council.

DISCUSSION

Glomus tumor is a neoplastic lesion of mesenchymal origin arising from the neuromyoarterial canal or glomus body.[3] It is a rare neoplasia and despite local blood vessel invasion, these tumors are mostly benign.[4] Glomus tumor of the stomach is located in submucosa or muscular propria layer of the gastric wall.[2] Most of glomus tumors are asymptomatic and incidentally diagnosed.[3] Our patient was asymptomatic and incidentally diagnosed. The difference of our case is; patient didn't take any medication or surgery 3 years long after the diagnose. Despite this situation, the tumor size didn't grow and patient remained asymptomatic. Glomus tumor of the stomach appears solid submucosal tumor with or without ulceration in endoscopic images. It can't be differentiated from the other important possible diagnoses as GIST, carcinoid tumor, lymphoma, angiomyoma.[4] Our patient's upper gastrointestinal endoscopy showed a submucosal polypoid lesion which has intact surface mucosa.

Imaging findings help for differential diagnosis. CT scan shows that gastric glomus tumor appears homogenous submucosal lesion and they may have calcification but tumor may have heterogeneity, hemorrhage or necrosis.[5] In Endoscopic Ultrasound (EUS), gastric glomus tumors are seen hypoechoic, well-bordered lesion, located in 3rd or 4th layer of gastric wall. However; because of the hemorrhage and calcification, the tumor can show heterogenous echogenicity.[6] The surgeon can prefer endoscopic submucosal resection (ESR) rather than more radical surgeries if the tumor is appropriate for it. Local resection by open or laparoscopic surgery is generally the most effective treatment. Endoscopic submucosal enucleation can be used in selected patients.[7] In immunohistochemistry examination, tumor cells are strongly positive for SMA, vimentin, calponin, collagen type 4 and laminin.[8] In our case, tumor cells were positive for SMA, vimentin, and caldesmon. Gastric glomus tumors are generally benign but rarely they can be malignant. According to WHO classification of tumors of soft tissue and bones; glomus tumor should be defined as a malignant tumor when its size is >2 and located in subfascial or viscera, with atypical mitotic figures, nuclear atypia, and mitotic activity.[9] Our patient's tumor size was 9 cm but there wasn't any atypical mitotic figures, nuclear atypic and mitotic activity. Also this tumor remained the same size for one year without treatment. In our multidisciplinary council, we decided to follow up the patient after the surgery. Until now, there was no recurrence and the patient is healthy.

In conclusion, a large glomus tumor of the stomach with typical immunohistochemical findings which although rare, should be considered in the differential diagnosis of gastric lesions. Patients being incompat-

ible with timing of the treatment is the difference for this case report. Although the patient's tumor was untreated for 3 years, tumor progress was not observed.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Design: *Tevfik Kıvılcım Uprak, Ayşegül Bahar Özocak;* ***Control/Supervision:*** *Cumhur Yeğen, Tevfik Kıvılcım Uprak;* ***Data Collection and/or Processing:*** *Tevfik Kıvılcım Uprak, Ayşegül Bahar Özocak;* ***Analysis and/or Interpretation:*** *Cumhur Yeğen, Mümin Coşkun;* ***Literature Review:*** *Ayşegül Bahar Özocak, Tevfik Kıvılcım Uprak;* ***Writing the Article:*** *Tevfik Kıvılcım Uprak, Ayşegül Bahar Özocak;* ***Critical Review:*** *Cumhur Yeğen, Mümin Coşkun;* ***References and Fundings:*** *Tevfik Kıvılcım Uprak.*

REFERENCES

1. Kay S, Callahan WP Jr, Murray MR, Randall HT, Stout AP. Glomus tumors of the stomach. Cancer. 1951;4(4):726-36. [Crossref] [PubMed]
2. Kang G, Park HJ, Kim JY, Choi D, Min BH, Lee JH, et al. Glomus tumor of the stomach: a clinicopathologic analysis of 10 cases and review of the literature. Gut Liver. 2012;6(1):52-7. [Crossref] [PubMed] [PMC]
3. Wang ZB, Yuan J, Shi HY. Features of gastric glomus tumor: a clinicopathologic, immunohistochemical and molecular retrospective study. Int J Clin Exp Pathol. 2014;7(4):1438-48. [PubMed]
4. Matevossian E, Brücher BL, Nährig J, Feuβner H, Hüser N. Glomus tumor of the stomach simulating a gastrointestinal stromal tumor: a case report and review of literature. Case Rep Gastroenterol. 2008;2(1):1-5. [Crossref] [PubMed] [PMC]
5. Park SH, Han JK, Kim TK, Lee JW, Kim SH, Kim YI, et al. Unusual gastric tumors: radiologic-pathologic correlation. Radiographics. 1999;19(6):1435-46. [Crossref] [PubMed]
6. Imamura A, Tochihara M, Natsui K, Murashima Y, Suga T, Yaosaka T, et al. Glomus tumor of the stomach: endoscopic ultrasonographic findings. Am J Gastroenterol. 1994;89(2):271-2. [PubMed]
7. Chen KB, Chen L. Glomus tumor in the stomach: a case report and review of the literature. Oncol Lett. 2014;7(6):1790-2. [Crossref] [PubMed] [PMC]
8. Chou HP, Tiu CM, Chen JD, Chou YH. Glomus tumor in the stomach. Abdom Imaging. 2010;35(4):390-2. [Crossref] [PubMed]
9. Fang HQ, Yang J, Zhang FF, Cui Y, Han AJ. Clinicopathological features of gastric glomus tumor. World J Gastroenterol. 2010;16(36): 4616-20. [Crossref] [PubMed] [PMC]