A 20-YEAR-OLD MAN WITH LARGE GASTRIC LIPOMA - IMAGING, CLINICAL SYMPTOMS, PATHOLOGICAL FINDINGS AND SURGICAL TREATMENT

Stylianos Kapetanakis, Jiannis Papathanasiou1, Aliki Fiska, Athanasios Ververidis, Thespis Dimitriou, Zheliazko Hristov1, George Paskalev1
Department of Anatomy, Medical School, Democritus University of Thrace, Alexandroupolis, Greece, 1Medical University, Plovdiv, Bulgaria

ABSTRACT
A broad search of the available literature yielded no other report of gastric lipoma of that size (13.5×6.5×4.5 cm) at this early age. The patient (a 20-year-old man with giant lipoma in the anterior gastric wall) presented with haematemesis and melena after excessive alcohol consumption. Gastric resection was performed. At 5-year follow up the patient is healthy and doing well. Epidemiology of gastric lipoma, the differential diagnosis, means of diagnosis and treatment are discussed.

Key words: gastric lipomas, lipomas, hematemesis

INTRODUCTION
Lipomas of the gastrointestinal tract occur very rarely (1:600 necropsies1); the commonest site they are found is the colon, followed by the small intestine. Gastric lipomas are quite rare accounting for 5% of all the gastrointestinal lipomas and 3% of all benign tumours of the stomach. The peak incidence is in the seventh decade.2

Since resection was proposed by Ackerman and Chughtai in 1975, therapy of gastric lipomas has been changing. A CT scan preoperatively can change the treatment modality from mere observation in the asymptomatic to gastrectomy in symptomatic cases. Endoscopic removal is an alternative in pedunculated tumours.

To date, according to the literature available to us, only about 250 such tumors have been described and none of them involves a 20-year-old patient with lipoma of such size.3

CASE REPORT
A 20-year-old man was admitted to the University Hospital of Alexandroupolis because of haematemesis after consuming alcohol. Gastric endoscopic examination revealed a large smooth bilobed mass at the anterior wall of the gastric body with a central crater and elastic texture. The histologic analysis of endoscopically removed tissue showed the superficially ulcerated mesenchymatous neoplasm of the stomach obviously a lipoma. The patient undertook surgery during which a large tumor was found in the anterior wall and towards the minor curvature of the stomach with smooth margins and dimensions 13.5×6.5×4.5 cm causing a stricture of the lumen. The liver and the adjacent organs were found normal and the lymph nodes clean. A 4/5 Roux-en-Y gastrectomy was performed with CEEA 31. Post-surgically, the patient showed a six-day high fever attributed to pleural fluid (left) which was cured with proper drugs and physiotherapy. The ultrasound examination of the abdomen was normal. He received 2 blood units because of low Hct (22%). After the fifth day he began to receive fluids per os and then solid food without problems. The histology report of the surgically removed tumor showed a very large intramural gastric lipoma with intact surgical boundaries. The patient is currently alive and well without recurrence 5 years after surgery.

DISCUSSION
Lipomas of the gastrointestinal tract are uncommon, slow growing, fatty tumors that can occur anywhere along the gut. Although generally single, they may be multiple. Peak occurrence is in the fifth to seventh decade of life, with a slight female predominance. This case report concerns a 20-year-old man with a sizeable lipoma in the anterior gastric wall.
The clinical symptoms were hematemesis and pain. The surgical excision was performed with Roux en Y gastrectomy.

Part of stomach and part of large omentum with total dimensions 22 cm in the major curvature and 11.5 cm in the minor curvature were examined. An intramural cylindrical mass 13.5×6.5×4.5 cm was found along the minor curvature and at the anterior gastric wall causing a degree of lumen stricture. The surface of this tumor presents an ulceration of 1.8 cm in diameter. The limits of the tumor and muscle layers were clearly outlined. The part of large omentum with dimensions 22×18 cm appears with no macroscopical lesions. Grossly, the tumor itself consists of bright yellow fat separated by fine fibrous trabeculae (Fig. 1).

Microscopically, lipomas are composed of mature adipose tissue with no cellular atypia. Areas of necrosis, infarct and calcification may be present. It is important not to confuse the histiocytes associated with fat necrosis with lipoblasts. The appearance of lipoblasts is the morphologic denominator of liposarcoma. Liposarcoma, the malignant counterpart of lipoma, is a well circumscribed but not encapsulated tumor which when appearing yellowish can mimic lipoma. Approximately 90% - 95% of lipomas are located in the submucosa; the remaining 5% - 10% are subserosal. In our case very large intramural lipoma of the stomach with areas of reactive fibrosis and/or fibroblastic activity in the ulcerated area of the tumor with mild inflammation and small hyperplasia of the gastric mucosa near the ulcer were recognised. The remaining gastric mucosa appears with no substantial lesions. Microcystic dilatation of the gastric glands is recognized near the tumor. Surgical limits of excision are clear. Moderate alterations of acute inflammation on the serosa are apparently due to the surgical procedure. Malignant neoplasmatic alteration in the examined material does not exist (Figs. 2, 3).

Morphologic variations of lipomas are: fibrolipoma, myxolipoma, chondroid lipoma, myolipoma, spindle cell lipoma, pleiomorphic lipoma, angiolipoma. Lipomas may develop in the pharynx or in the esophagus, but the most common are these in the small bowel ranks (20-25% of lipomas) and in the colon (65-75%). Lipomas may develop at other rare locations such as adrenal gland, parotid gland, parapharyngeal space, mediastinum, the pleura as reported by numerous case reports.

Gastric lipomas are a rare lesion accounting for only 5% of alimentary tract lipomas and for only 3% of all benign gastric masses. Most gastric lipomas are located in the antrum; the remainder are spread throughout the body and fundus. The usual antral location accounts for a high frequency of prolapse into the pylorus. Because of the lipoma’s supple nature, however, complete obstruction of the gastric outlet seldom occurs. As in other segments of the gut, lipomas are usually single but may be multiple.

Endoscopy and radiology play a major role in the diagnosis of lipomas. Endoscopy relies on the gross appearance of the mass to suggest the correct diagnosis. CT, in the properly prepared patient, is able to take advantage of the fat content, thereby

Figure 1. Macroscopic view of stomach lipoma 13.5×6.5×4.5 cm.
identifying a mass as a lipoma. The finding of a homogeneous mass with Hounsfield units between -80 and -120 is nearly pathognomonic for a lipoma.²

No more than 250 cases of gastric lipomas have been published until now. The dimensions that have been described in these cases are smaller than this in our case. In the largest series of patients with stomach lipomas the average size of the lipomas was 6.5 cm (range 3.5 - 9.0) measured at the greatest dimension when in our case the lipoma was sizeable with the greatest dimension to be at 13.5 cm one of the greatest in English literature.⁹-¹²

Today, after 7 years, the patient is free of symptoms with no radiological or other findings. In conclusion, gastric lipomas are a rare entity that can

Figure 2. Pathological findings of ulcerated lipoma. H&E ×40.

Figure 3. Pathological findings. Fatty tissue of the tumor with fibrosis near the ulceration. Absence of lipoblasts. H&E ×100.
mimic symptoms of peptic ulcer at first appearance. Histologically, the absence of atypia and lipoblasts set the diagnosis and surgical resection remain the treatment of choice for symptomatic lipoma.

REFERENCES