

Acute abdomen due to rupture of hemangiopericytoma of the greater omentum: case report

Omentum majus yerleşimli hemanjiyoperistom yırtığına bağlı akut karın gelişimi: Olgu sunumu

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Hemangiopericytoma (HP) is a vascular tumor that mostly develops in soft tissues. The greater omentum is a very rare site for its occurrence. We present herein the clinical evaluation and outcome of a very rare case of HP that caused acute abdomen. We evaluated a case of acute abdomen due to rupture of a HP of the greater omentum. The clinical and laboratory findings and treatment modality are reported. A 70-year-old patient with severe abdominal pain was operated with the diagnosis of acute abdomen. A semi-solid mass (12x10x6 cm) originating from the greater omentum was detected during surgery. There was active bleeding from the tumor. Pathologic evaluation of this lesion was reported as benign HP. HP of the greater omentum can be the cause of intraabdominal bleeding leading to acute abdomen. Surgical resection is the treatment of choice, especially in benign hemangiopericytomas.

Key Words: Hemangiopericytoma; intraabdominal bleeding; surgery.

Hemanjiyoperistom daha çok yumuşak dokuları tutan vasküler tümördür. Omentum majus tümörün nadiren geliştiği yerlerdendir. Bu yazıda, akut karına neden olan bu ender tümör vakasının klinik değerlendirmesi yapıldı, sonucu sunuldu. Omentum majus yerleşimli hemanjiyoperistomun yırtılmasına bağlı akut karın gelişen olgunun klinik tablosu, laboratuvar bulguları ve tedavi modalitesi ele alındı. Şiddetli karın ağrısı ile gelen 70 yaşındaki hasta, akut karın ön tanısıyla ameliyat edildi. Ameliyat esnasında omentum majustan kaynaklanan 12x10x6 cm'lik semi solid kanayan kitle saptandı. Tümörün patolojik incelemesi sonucu selim hemanjiyoperistom olduğu anlaşıldı. Omentum majus kaynaklı hemanjiyoperistom akut karına yol açan karın içi kanamalara neden olabilir. Özellikle selim olgularda cerrahi rezeksiyon yeterli tedaviyi sağlar.

Anahtar Sözcükler: Hemanjiyoperistom; karın içi kanama; cerrahi.

Hemangiopericytoma (HP) is a vascular tumor arising from pericytes that surrounds capillaries.^[1] It is a rare neoplasm that can be seen in any part of the human body. The lower extremities, especially the thigh, pelvic fossa and retroperitoneum, are most common sites, followed by the head and neck region.^[2,3] HP is primarily a tumor in adulthood (median age 45 years).^[2] There is no sex predilection and no evidence of increased familial incidence. Most patients suffer from a slowly enlarging painless mass. HP is usually presented as a solitary mass covered by a thin vascular pseudocapsule. The median size of the excised tumors was reported as 6.5 cm.^[2]

We evaluate herein a case of acute abdomen due to rupture of a HP of the greater omentum. The clinical and laboratory findings and treatment modality are reported.

CASE REPORT

A 70-year-old male with severe abdominal pain was admitted to our emergency service. His history revealed pain lasting for six hours, which started first in the epigastrium and then extended over the entire abdomen. Nausea and vomiting were accompanying symptoms. There was no palpable mass on physical examination but abdominal guarding was present.

Vitals of the patient were as follows: axillary temperature 38°C, blood pressure 100/60 mmHg and pulse rate 110/minute. White cell count elevation was the only abnormal laboratory value (19,800/ml).

The abdominal computed tomography (CT) demonstrated a mass of 12x8 cm on the right side of the pelvis and accumulation of massive fluid within the entire abdomen.

The patient underwent urgent surgical procedure and one liter of hemorrhagic fluid was aspirated. During detailed exploration, a semi-solid mass of 12x10x6 cm originating from the greater omentum was detected. The tumor was on the right side of the pelvis inferior to the cecum. There were no adhesions between the mass and the surrounding organs. The mass was surrounded with huge blood vessels originating from the omentum majus as large as 1 cm. A single perforating vessel was damaged and caused the bleeding. The mass was completely removed (Fig. 1).

According to histopathological examination, the lesion consisted of uniform rounded-spindled cells embedded in a moderately collagenous stroma and covered with dilated vascular lumen of varying diameters. There was no mitotic activity or necrosis (Fig. 2). In immunohistochemical examination, tumor cells were CD34- and vimentin-staining positive. Pathologic evaluation of this lesion was reported as benign HP.

DISCUSSION

Hemangiopericytoma usually develops in deep soft tissues and affects middle-aged patients.^[2,3] The greater omentum is a very rare site for its occurrence.^[4] Only

12 cases have been reported to date in the English-language literature.^[4,5] Malignant liver HP that caused intraabdominal bleeding after an abdominal trauma was reported.^[6] Our case is the first HP of the greater omentum that led to acute abdomen due to spontaneous perforation. There was no history of trauma.

Histologically, the HP presented a spindle-shaped configuration located around vessels creating a network described as a staghorn-like pattern. Immunohistochemically, HP stains positive for vimentin and CD34.^[7] Our specimen fulfilled this specification.

It is difficult to distinguish benign HPs from malignant type. The criteria for malignancy proposed by Enzinger and Smith^[2] are large lesion size (>5 cm), increased mitotic rate (≥ 4 mitoses/10 high power field [HPF]), high degree of cellularity, presence of immature and pleomorphic tumor cells, and foci of hemorrhage and necrosis indicating a highly malignant course. Similar criteria were reported by Kaneko et al.^[4] in their review of 11 cases of HPs of the greater omentum. Our case did not fulfill the malignancy criteria, except for the large tumor size.

Radiological findings are usually not specific. Our case presented a well-circumscribed, radiopaque soft tissue mass.

Surgical resection is the primary treatment for benign tumors. Radical surgery, with or without adjunctive radiotherapy, is required for less well-differentiated malignant HPs.^[7] Systemic adjuvant chemotherapy can be used for malignant tumor but there is a standard effective chemotherapeutic regimen.^[8,9] Our case differed in view of his urgent need for surgery. It is very rare for HPs to present as acute

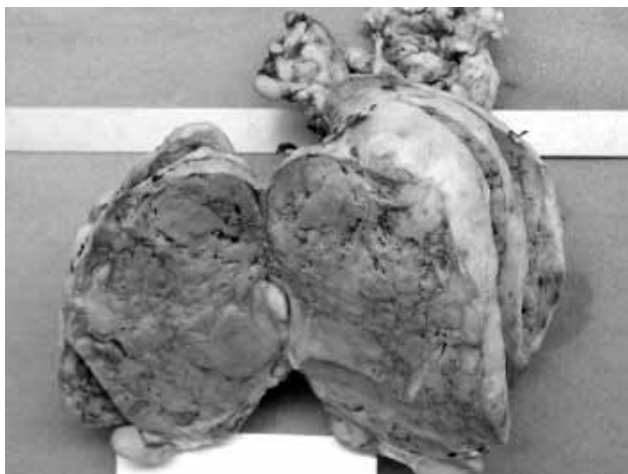


Fig. 1. Macroscopic appearance of the mass.

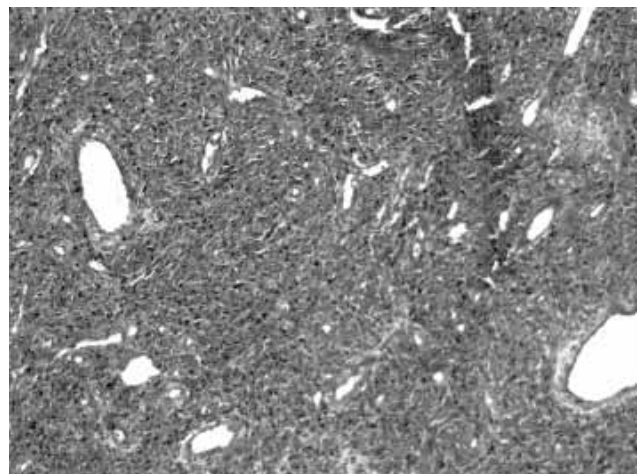


Fig. 2. Microscopic appearance of the mass (H-E x 100).

abdomen. There was no time for a detailed evaluation in the presented case.

In conclusion, HP of the greater omentum can be the cause of intraabdominal bleeding and lead to acute abdomen. Surgical resection is the treatment of choice, especially in benign HPs.

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