

Primary Omentum Malignant Hemangiopericytoma Present with Acute Abdomen

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Abstract: The greater omentum primary malignant tumors are rare, with less than 50 cases reported. Malignant hemangiopericytomas constitute only four of these cases. The common clinical manifestations of a malignant omental tumor are abdominal mass and pain. We report on a woman 38 years old who came to the hospital's emergency department with a finding consisting of intestinal obstruction (abdominal pain, constipation, abdominal distention, and vomiting), and during a clinical examination a mass was discovered in the lower half of her abdomen. She had been experiencing these symptoms for three days before her arrival. During a clinical examination, a large size, hard mobile mass was discovered in the lower half of her abdomen. The patient underwent an abdominal CT scan which indicated the presence of a sizable, soft tissue mass located within the abdominal and pelvic region, exerting pressure on the small bowel loops, with mild free ascites. Due to the patient's acute abdomen, an exploration laparotomy was performed, revealing a large mass in the omentum measuring 20×20×10 cm and weighing 3 kg. The mass, along with the omentum, was completely removed, and histopathology confirmed a malignant hemangiopericytoma.

Keywords: omental cancer, acute abdomen, surgical exploration

Introduction

Primary omental malignancies include liposarcoma, hemangiopericytoma, fibrosarcoma, leiomyosarcoma, mesothelioma, desmoid tumor, and malignant fibrous histiocytoma. They are rare, making their diagnosis quite challenging. They are usually found in people in their 50s or 60s.^{1,2}

In 1942 Stout and Murray described hemangiopericytoma as a distinctive soft tissue neoplasm. Hemangiopericytoma is a type of tumor thought to come from Zimmerman pericytes displaying signs of myoid or myofibroblast differentiation.³⁻⁵ The World Health Organization has classified hemangiopericytoma as a solitary fibrous tumor (SFT) that occurs outside the pleura as either benign or malignant with an overall incidence of 0.6%. While there have been twenty documented instances of hemangiopericytoma, the literature only mentions four cases of hemangiopericytoma.^{2,6}

Case Presentation

A woman aged 38 arrived at the emergency department of our hospital with symptoms including abdominal pain, constipation, vomiting, and abdominal distension. These symptoms had started three days earlier. However, the patient had a history of abdominal discomfort and distension due to swelling that began in the epigastric area five years earlier. As the patient lives far away, the patient had been taking pain relievers on her own after going to a peripheral rural clinic for assistance. During our examination the patient was fully conscious but seemed unwell and dehydrated. A mass was discovered across the lower half of her abdomen, causing abdominal distention. The mass measured 20×20 cm in size and was hard, non-pulsatile, and tender to palpation. It disappeared when the patient raised her head against resistance and was mobile. The laboratory result complete blood counted HP 7,5 WBC 14. An abdominal ultrasound revealed



Figure 2 During the surgery, a large mass was discovered that infiltrated the greater omentum.

immunohistochemistry not always a reliable diagnostic tool.⁵ On the other hand, hemangiopericytoma cells express antigens such as CD34 (100%), CD99, and Bcl-2 (70–90%).^{1,4,8} STAT6 serves as a reliable immunohistochemical indicator for diagnostic purposes,⁹ but in our case CD34 was present, whereas STAT6 was not present. In order to identify hemangiopericytoma it is essential to conduct an assessment including running necessary laboratory tests and carrying out imaging studies.¹⁰ Magnetic resonance imaging (MRI) is a more effective tool than using a computer tomographic (CT) scan to assess the size of the tumor and how it interacts with tissues. In our case, we proceeded with the surgery after reviewing the CT scan results as the size of the lesion necessitated surgery due to rupture of tumor with intra-peritoneal bleeding regardless of the result of tumor type. Additionally, our hospital is currently experiencing resource constraints, and many patients are unable to afford extra investigations.

The vascular tumor under consideration necessitates a treatment regimen that involves surgical intervention, chemotherapy, and radiotherapy to achieve good outcomes.

Table I The Five Cases Recorded with This Condition

| Case | Age | Size in cm | Mitotic Figures (/10HPF) | Recurrence/Metastasis | Disease-Free Follow-Up (Months) |
|----------|-----|------------|--------------------------|-----------------------|---------------------------------|
| 1 | 60 | 24×19×10 | 25 | Absent | 4 |
| 2 | 40 | 9 | 9 | Present | 34 |
| 3 | 29 | 28×25×11 | 0 | Absent | 48 |
| 4 | 57 | 18×11×6 | 6 | Absent | 32 |
| 5 | 61 | 17×17×5 | Few | Absent | 12 |
| Our case | 38 | 20×20×10 | 0 | Absent | 3 |

The primary method of treatment is en-bloc surgical excision¹¹ When surgery is not feasible, radiotherapy is often the option. According to the literature, there is not support for the use of adjuvant chemotherapy.^{10,12,13} Before proceeding with surgery, it is advisable to conduct a CT or ultrasound-guided biopsy along with staining for diagnosis and treatment. This aids not only in confirming the diagnosis, but also in comprehending the dimensions and prognosis of the mass.^{10,14,15}

Conclusion

This report describes a rare case of primary omental malignant hemangiopericytoma with acute abdomen. The surgery to remove the tumor only effected part of management. Early detection is important with this kind of tumor, for early surgical intervention, and to improve the prognosis.

Statement of Ethics and Informed Consent

Written informed consent was obtained from the patient, including for the publication of the paper and its content, and approval by Institutional Al-Hawbani hospital, Bajel, Al-Hodeidah, Yemen, was obtained for the publication of this work.

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Disclosure

The authors declare no competing interests or conflicts in this work.

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