CHRONIC CONTAINED RUPTURE OF AN ABDOMINAL AORTIC ANEURYSM MIMICKING A RETROPERITONEAL TUMOR

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Chronic contained rupture of an abdominal aortic aneurysm (AAA) is a rare event that is difficult to diagnose due to the atypical and chronic symptoms. We report a case of chronic contained rupture of AAA mimicking a retroperitoneal tumor in a 36-year-old man. The patient presented with weight loss and chronic lower abdominal pain, and was referred to our clinic with a suspected retroperitoneal tumor. Abdominal computed tomography (CT) revealed a distinct mass measuring 15×10×10 cm in the left retroperitoneal space, involving the abdominal aorta. One week later he experienced sudden abdominal pain radiating to the back. He was subsequently diagnosed with ruptured AAA and aortic dissection. The patient received implantations of both common iliac arteries to the abdominal aorta using Y-grafts and an ascending-to-descending aortic graft in a two-stage operation. His recovery from surgery was uneventful.

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Key words : Aortic aneurysm, contained rupture, retroperitoneal tumor

INTRODUCTION

A ruptured abdominal aortic aneurysm (AAA) and acute aortic dissection (AAD) are relatively easy to diagnose because of the sudden onset of symptoms, such as strong pain and hypotensive shock. Chronic contained rupture of an AAA is uncommon and difficult to diagnose due to atypical and chronic symptoms. The aneurysms in these cases are usually small-to-moderate in size, and computed tomography (CT) is generally needed to correctly diagnose chronic contained rupture of AAA[1]. In some cases, however, it may still be difficult to distinguish from other diseases such as retroperitoneal tumor and abscess. Herein, we report a case of chronic contained rupture of AAA, which was initially diagnosed as a retroperitoneal sarcoma.

Fig. 1. Intravenous pyelography showing no function and no iliopsoas line.

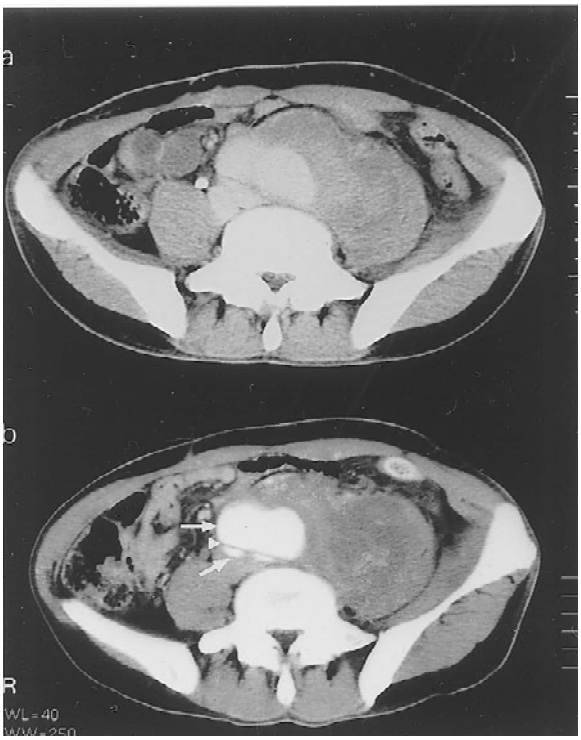

Fig. 2. a : Abdominal CT scan showing a distinct mass measuring 12×15×10 cm in the left retroperitoneal space, with involvement of the aorta. b : An abdominal CT scan revealed two distinct lumens (arrows) with a visible flap in the abdominal aorta (arrowhead).

CASE REPORT

A 36-year-old man with symptoms of weight loss and chronic lower abdominal pain over the previous two months was referred to our clinic with a suspected retroperitoneal sarcoma. Physical examination revealed an abdominal mass in the left lower abdomen. Intravenous pyelography showed no function of the left kidney and loss of the left iliopsoas line (Fig. 1). Abdominal CT scan performed at the previous clinic showed a distinct mass measuring 12×15×10 cm in the left retroperitoneal space involving the abdominal aorta (Fig. 2a). Serum levels of tumor markers were normal. The clinical findings suggested retroperitoneal sarcoma with a differential diagnosis of retroperitoneal abscess, aortic aneurysm with hematoma, or malignant lymphoma. One week after presenting at our clinic, the patient experienced severe lower abdominal pain radiating to the back, prompting us to refer him to a cardiovascular surgeon with suspicion of aortic dissection and AAA. Abdominal CT revealed two lumens in the dilated abdominal aorta (Fig 2b), identifying the retroperitoneal mass as a contained rupture of AAA and aortic dissection (Fig 3). The patient underwent Y graft implantation. Histological examination of the resected tissue revealed medial necrosis of the aortic wall and organized hematoma. Graft replacement in the ascending and descending aorta was performed subsequent to the initial surgery.

DISCUSSION

Chronic rupture of AAA is characterized as a "contained" or "sealed" rupture and is an uncommon occurrence[1]. The contained rupture occurs when the tissue surrounding the aortic wall effectively contains the hemorrhage. The consequently slow rate of blood loss allows the patient to remain hemodynamically stable[2]. Jones et al.[1] devised clear criteria for this entity: 1) known AAA, 2) previous symptoms of pain that may have resolved, 3) a patient whose condition is stable and whose hematocrit is normal, 4) CT showing retroperitoneal hematoma, and 5) pathological confirmation of organized hematoma. The clinical symptoms and findings in our case met all these criteria, and our differential diagnosis included aortic aneurysm with hematoma. However, the patient age and no past history of cardiovascular disease except for moderate hypertension hampered a diagnosis of contained rupture of AAA.

The CT imaging characteristics in chronic contained rupture AAA were defined by Ando et al.[3] as including 1) discontinuous rim of calcification in the true aneurysm, 2) well-defined soft tissue density adjacent to the aorta, 3) concealed psoas muscle and displaced viscera depending on the size of the lesion, and 4) no appearance of contrast material in the hematoma in some cases. In the present case, CT revealed two lumens in the dilated abdominal aorta in addition to the above-mentioned criteria.

With regard to the prognosis for patients with chronic contained rupture of AAA, the timing of a catastrophic re-rupture cannot be predicted[4], and patients in a stable condition should be admitted for urgent surgical repair. We recommend considering a differential diagnosis of chronic contained rupture of AAA when assessing a case involving a retroperitoneal mass.

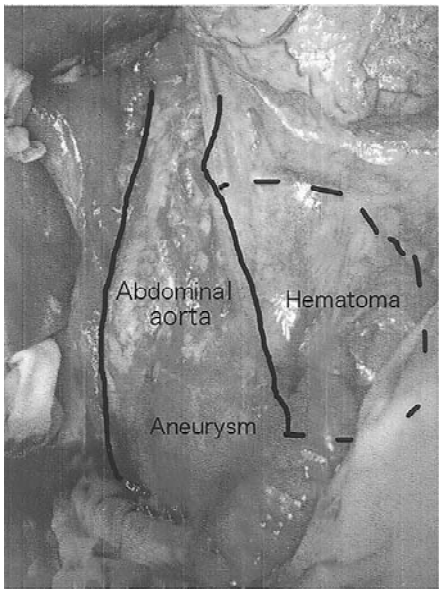

Fig. 3. An intraoperative view shows aortic aneurysm and hematoma in iliopsoas muscle.

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和文抄録

後腹膜腫瘍に類似した腹部大動脈瘤 Chronic contained rupture の 1 例

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腹部大動脈瘤に伴う chronic contained rupture は稀な症状であるが，慢性の非定型的な症状を呈し時に診断が困難である．われわれは後腹膜腫瘍と類似した36歳男性例を経験したので報告する．患者は体重減少と腹部鈍痛を主訴に後腹膜腫瘍の疑いにて当科紹介となった．腹部 CT 検査で左後腹膜腔に 10×5×10 cm の腫瘤性病変を認め，これは腹部大動脈を巻き込んでいた．精査中 1 週間後に背部に放散する強い腹痛が出現，緊急腹部 CT 検査を施行し解離性大動脈瘤破裂と診断した．血管外科で緊急手術を施行し左右総腸骨動脈と腹部大動脈間を Y グラフトで置換した．二次的に上行下行大動脈グラフト置換術も施行した．

（泌尿紀要 **53**：397-399，2007）