Elective laparoscopic surgery for retroperitoneal hematoma in a patient with adrenal myelolipoma: A Case Report

Abstract A 44-year-old man presented to the emergency department with acute left flank pain. Abdominal computed tomography (CT) revealed a retroperitoneal hematoma originating from an adrenal myelolipoma, and the patient was eventually referred to our department. Because no active bleeding from the tumor was observed and the patient’s symptoms and vital signs were stable, he was admitted to our department and observed carefully. A CT revealed a reduction in size of the hematoma and adrenal gland (3.5 cm), we performed laparoscopic left adrenalectomy, three month after initial presentation. There wasn’t almost any adhesion around the tumor, and we were able to excite it without any complications. The postoperative course was uneventful, and the patient was discharged 9 days after the surgery.

Key words: adrenal myelolipoma, elective laparoscopic surgery, spontaneous rupture

Introduction Adrenal myelolipomas are rare benign tumors, composed of mature adipose and hematopoietic tissues. They are usually non-functional and asymptomatic, and are incidentally detected imaging such as ultrasound, computed tomography (CT) or magnetic resonance imaging (MRI). Most myelolipomas are situated in the adrenal glands and account for 3.6% of adrenal incidentalomas in Japan. Some of them are associated with other adrenal disorders, such as Cushing’s syndrome, non-functional adrenocortical adenomas, congenital adrenal hyperplasia, and primary aldosteronism. However, bleeding due to spontaneous rupture of an adrenal myelolipoma is very rare. We report a case of spontaneous rupture of an adrenal myelolipoma in which we were able to safety perform low-invasive laparoscopic surgery after waiting for spontaneous hematoma resolution.

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Rupture of adrenal myelolipoma

the surgical specimen showed normal adrenal gland and yellow tissue (Fig. 2). The histopathologic examination confirmed adrenal myelolipoma, containing fatty and hematopoietic cells (Fig. 3). The postoperative course was uneventful, and the patient was discharged 9 days after the surgery. At 2 years and 5 months after the surgery, the patient was well showed no sign of recurrence.

Discussion

Adrenal myelolipoma is a benign tumor composed of mature adipose and hematopoietic tissues. The incidence of this tumor at autopsy is 0.08%-0.2%\(^6\). Most adrenal myelolipomas are asymptomatic and endocrinologically non-functioning. However, symptoms such as abdominal pain, due to acute tumor hemorrhage, and abdominal discomfort due to increasing tumor size sometimes occur.

Including the case presented here, only 10 cases of spontaneous rupture of an adrenal myelolipoma have been reported in Japan\(^3\). With advances in diagnostic imaging procedures such as CT and MRI, adrenal incidentalomas are now detected more frequently. CT frequently demonstrates fat density with areas of soft-tissue attenuation. In our patient, the fatty tissue was detected on CT in the left supra-renal area; therefore, we easily diagnosed the adrenal myelolipomas. If bleeding and uncontrollable hypotension occur, surgical operation or transcatheter arterial embolization (TAE)\(^4\) should be performed. However if initial conservative therapy can control retroperitoneal hemorrhage, a watch-and-wait approach is safe and less invasive procedure for the patient, without the risk of intraoperative blood loss. Despite this recommendation, Amano et al.\(^5\) reported that, even after the watch-and-wait approach, they were forced to remove the left kidney and tumor together because of severe adhesions. In our patient, however, after hematoma resorption, there was almost no adhesion around the tumor, and we were able to safely perform low-invasive laparoscopic surgery with only approximately 200ml of blood loss and without removing the left kidney; moreover, the patient could be discharged early. Thus, if the symptoms and vital signs are stable and there is no active bleeding, we recommend waiting for absorption of the hematoma prior to undertaking a low-invasive operation.

Conclusion

We report a case of spontaneous rupture of an adrenal myelolipoma prior to elective laparoscopic surgery. We were able to undergo low-invasive laparoscopic surgery safely by waiting for absorption of the hematoma.
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Conflict of interest
None declared.

References