Angiomyolipoma (AML) of the liver is an extremely rare benign tumor, which is composed of fat, vessels and muscles. Hepatic angiomyolipomas have always been reported as either solitary masses, or multiple tumors in association with tuberous sclerosis. We present a patient with recurrent uterine leiomyosarcoma with multiple hepatic angiomyolipomas. No evidence of tuberous sclerosis was found in the patient. The diagnostic features of hepatic AML on computed tomography differ from hepatic metastases, fatty infiltration, lipoma and hepatoma. Our findings are presented and discussed.

Key words: Uterus, leiomyosarcoma; Angiomyolipoma; Computed tomography; hepatic tumor

Angiomyolipoma (AML) of the liver is a very rare benign neoplasm, which is composed of vessels, muscle, and a variable amount of fat [1]. Hepatic angiomyolipomas have been reported as either spontaneous solitary masses or multiple tumors in association with tuberous sclerosis [2, 3]. We present a patient with recurrent uterine leiomyosarcoma with multiple hepatic angiomyolipomas. No stigma of tuberous sclerosis was found in the patient. Since the hepatic AML was benign, it was important to differentiate it from a malignant tumor to avoid any unnecessary surgical intervention. Confirming the diagnosis using imaging modalities becomes essential [5]. The high fat content and intratumoral vessels of AML result in a characteristic appearance on CT and therefore the diagnosis can be suggested pre-operatively.

DISCUSSION

Patients with uterine leiomyosarcomas have poor prognoses due to the propensity of the leiomyosarcomas to recur both locally and more often at distant sites. The median time to recurrence is less than 2 years. The liver is a common site of distant relapse of uterine leiomyosarcoma [4]. Such metastases frequently are markedly necrotic and do not contain calcification or fat. Therefore, when encountering a patient with recurrent uterine leiomyosarcoma and multiple hepatic tumors, the differentiation of primary hepatic tumors from metastases is important and essential.

Hepatic angiomyolipomas are extremely rare benign tumors and are predominately seen in women.
complication of percutaneous biopsies. The imaging characteristics of hepatic angiomyolipomas depend on the proportions of fat components which can range from less than 10% to over 50% [1, 2]. For the majority of radiologists, knowledge of AML is based upon the renal variety. The radiologic appearance of AML in the kidney and its association with tuberous sclerosis, are well known. However, hepatic AML is limited to only 5-10% of tuberous sclerosis cases [2]. Using sonography, the fat content of angiomyolipomas is easily detected by its hyperechogenicity. However, there is a potential for confusion between hepatic angiomyolipomas and hemangiomas using sonography, because both of them are hyperechoic and seen frequently in women. Computed tomography has proved to be a useful tool for identification of a fatty lesion because it is very sensitive and specific for the detection of fat density [5]. As in our patient, the fatty densities of hepatic angiomyolipomas were conspicuous, which made them different from uterine leiomyosarcoma with hepatic metastases. The differential diagnoses of fatty lesions include metastases from liposarcoma or teratocarcinoma, lipoma, focal fatty infiltration and hepatoma with fatty metamorphosis. Since the recognition of another important radiologic characteristic, the intratumoral vessels are detected using the contrast enhanced CT, color Doppler ultrasound, and magnetic resonance imaging (MRI) [1]. Lipoma and hepatoma with fatty metamorphosis do not have this characteristic. CT appearance in focal fatty infiltration of the liver does not have a mass effect, is non-spherical, and has poorly defined margins [2]. No evidence of tuberous sclerosis was identified in our patient. After experiencing the case, we would like to emphasize that hepatic angiomyolipomas should be added into the differential diagnosis of multiple fatty hepatic tumors, even in the absence of association with tuberous sclerosis. Meticulous detection of the fatty densities and intratumoral vessels of the hepatic tumors on CT are important for the correct diagnosis of hepatic angiomyolipomas. We found references to only 25 cases of hepatic AML in the English literature; not one of the cases occurred in association with uterine leiomyosarcoma. We believe that hepatic AML and uterine leiomyosarcoma are different diseases with no clinical correlation.

REFERENCES
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再發性子宮平滑肌纖維瘤與多發性肝內血管平滑肌脂肪瘤

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血管平滑肌脂肪瘤是一種罕見良性腫瘤，主要成份為脂肪 血管及肌肉組織。它常被報告為單獨或多個性腫瘤，且與結節性硬化症有所連聯。我們有一個病例是再發性子宮平滑肌瘤合併肝內多個血管平滑肌脂肪瘤。病人並沒有結節性硬化症候。在電腦斷層攝影(CT)下，肝內血管平滑肌脂肪瘤的診斷表徵與脂肪浸潤，脂肪瘤及肝癌不同。文章為此作一探討及敘述。

關鍵詞：子宮平滑肌纖維瘤；肝血管平滑肌脂肪瘤；斷電腦斷層攝影；肝腫瘤