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Bilateral Spontaneous Adrenal Hematoma: A Case Report. Diagnostic Approach and Literature Review

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Abstract **Case Report**

Spontaneous adrenal hematomas are rare and have multiple etiologies. It is characterized by clinical latency and can be mistaken for a malignant adrenal tumor. Here, we report a rare case of bilateral spontaneous adrenal hematoma in a 66-year-old patient. Preoperative diagnosis was established using computed tomography (CT). Bilateral adrenalectomy was performed, and pathological examination revealed an isolated hematoma without associated adrenal abnormalities.

Keywords: Adrenal, Spontaneous Hematomas, Diagnosis.

INTRODUCTION

Bilateral spontaneous adrenal hematoma (SAH) is a rare condition with various etiologies that can lead to adrenal insufficiency (AI), a life-threatening complication if not properly managed. These hematomas typically occur after trauma or anticoagulant therapy. We present here a unique case in which computed tomography (CT scan) played a crucial role in establishing the diagnosis

OBSERVATION

A 66-year-old female patient was treated for thrombocytopenia and admitted to the emergency department with acute abdominal pain, with no other associated signs. A clinical examination revealed diffuse abdominal tenderness. Abdominal computed tomography (CT) showed two bilateral adrenal masses, spontaneously hyperdense and non-enhanced after iodinated contrast injection, measuring 39 × 25 mm on the right and 46 × 25 mm on the left (Figure 1).

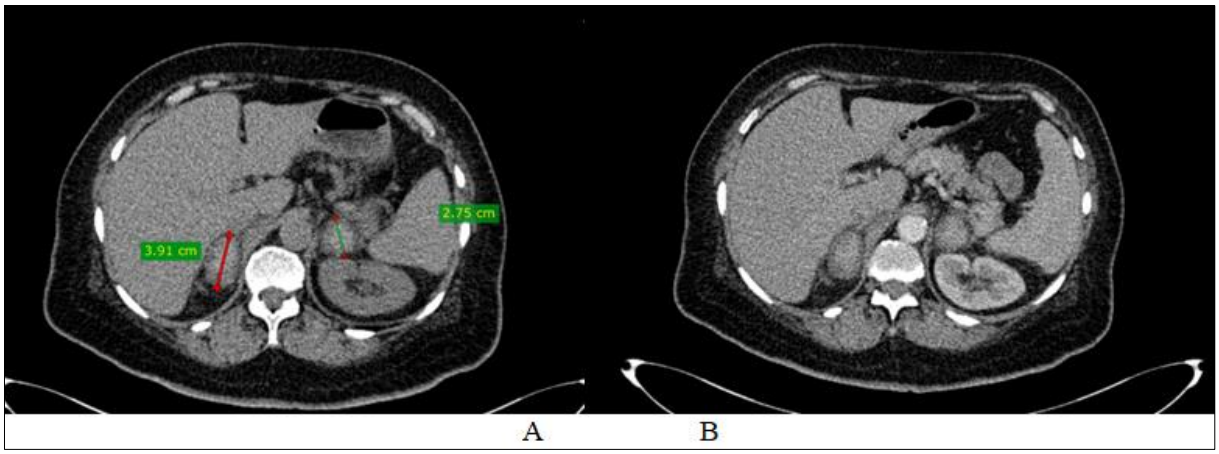

Figure 1: Abdominal CT scan without (A) and with (B) contrast injection showing a bilateral adrenal mass with no enhancement after contrast injection

MRI confirmed the CT findings, showing adrenal masses with high-intensity signals in the T1 and T2 sequences (Figure 2).

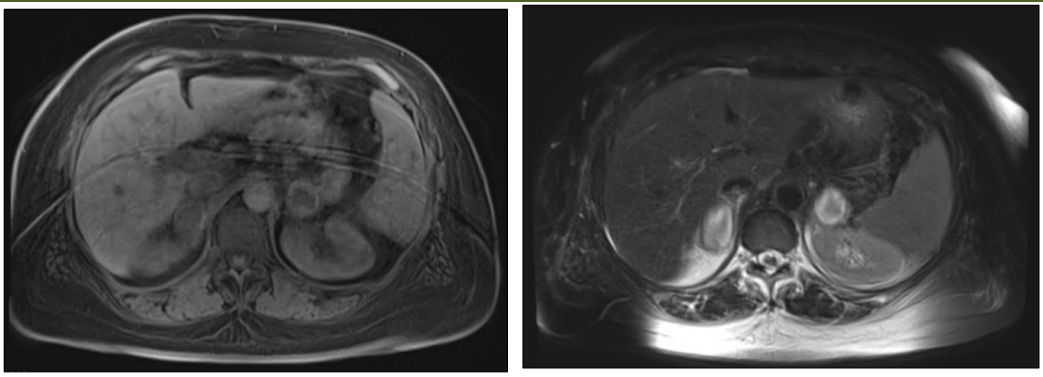

Figure 2: Abdominal MRI showing adrenal masses with hyperintense signals on T1 and T2 sequences.

Given the suspicious nature of these adrenal hematomas, adrenalectomy was decided upon. The procedure was performed via a subcostal anterolateral transperitoneal laparotomy. Pathological examination confirmed the hematoma's nature without tumor lesions. Postoperative recovery was uneventful, and no causal factor was identified.

DISCUSSION

Spontaneous adrenal hematoma is rare. The causes of these hemorrhages, apart from trauma, are varied and include stress, coagulation disorders (particularly after heparin therapy), and adrenal tumors such as angiomyolipomas, adenomas, pheochromocytomas, and metastases. Hypertension and idiopathic causes were considered. Clinically, these symptoms are nonspecific. Lumbago-abdominal pain is commonly present; however, a palpable mass due to a hematoma is rare. Sometimes, the hematoma is asymptomatic and incidentally discovered during an ultrasound. Abdominal ultrasound can raise suspicions, but computed tomography (CT) is the diagnostic method of choice. It often reveals a rounded or oval, well-defined mass, often heterogeneous, with or without calcification. The spontaneous density varies, typically tissue-like, and sometimes hyper- or hypodense. The absence of contrast enhancement is highly suggestive of the diagnosis, although a fine peripheral enhancement may be possible. Chronic hematomas mimic adrenal tumors in CT images. MRI is a key examination for diagnosing hemorrhage with high specificity. The hematoma appears as hyperintense on T1 and T2 sequences without enhancement after Gd injection. A homogeneous spontaneous density > 50 HU is considered pathognomonic of hematoma. Therapeutically, adrenalectomy, whether performed openly or laparoscopically, remains the ideal procedure for dispelling diagnostic doubt. However, the laparoscopic approach is increasingly favored because of its advantages. Some authors recommend a conservative approach, focusing only on managing the hematoma. However, this type of treatment carries the risk of hemorrhagic recurrence and may allow an undetected tumor (such as an adenoma or metastases), to progress. Pathological analysis of adrenal glands in cases of hematoma primarily involves vascular lesions dominated by venous thromboses. The adrenal glands may be partially or completely destroyed, or occupied by large hematomas compressing the glandular parenchyma, leading to hemorrhagic necrosis.

CONCLUSION

Spontaneous adrenal hematoma is rare. The positive diagnosis is often established preoperatively through CT scans or even MRI. Determining the etiology of the hematoma is a real challenge. Removing the adrenal gland, where the hematoma is located, represents a precautionary solution.

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