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Idiopathic adrenal hematoma mimicking neoplasia: A case report

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ABSTRACT

INTRODUCTION: Adrenal haemorrhage is a relatively rare condition. If there is not a specific ethology describing adrenal hematoma, then, this is termed as 'idiopathic adrenal hematoma'.
PRESENTATION OF CASE: We presented a case of idiopathic adrenal hematoma in this study. A 62-year-old woman was referred to our hospital for evaluation of a 40 mm mass in the left upper abdominal cavity. The histopathological findings of the surgical specimen revealed a hematoma with normal adrenal tissue.
DISCUSSION: The incidence of adrenal haemorrhage was found to be 1.1% regarding autopsy results. The Adrenal gland is highly vascular and vulnerable to haemorrhage. Before a surgical operation, it is difficult to diagnose idiopathic adrenal hematomas.
CONCLUSION: An adrenal hematoma should be kept in mind when adrenal masses assessing.

1. Introduction

Adrenal haemorrhage is generally caused by trauma, stress, sepsis, adrenal tumors, anticoagulation, haemorrhagic disorders and pregnancy and it is a relatively rare condition [1]. If there is not a specific ethology describing adrenal hematoma, then, this is termed as 'idiopathic adrenal hematoma'. There may be different subclinical or clinical symptoms such as nausea, abdominal pain, fever and hypotension due to circulatory collapse. It is sometimes found incidentally by imaging examination for another reason. Adrenal tumors associated with haemorrhage primarily include pheochromocytomas, adrenocortical cancers and metastatic lesions from other organs. From a clinical perspective, whether the lesion is benign or malignant is an important issue but is difficult to determine prior to surgery. In this case, we presented a case of idiopathic adrenal haemorrhage.

2. Case report

A 62 year old female patient suffering from low back pain applied to a hospital. After tomography scanning a 40 mm mass in diameter was identified on left adrenal gland (Fig. 1) and was subsequently referred to our hospital in July 2015. There was not symptom except back pain. She had no past medical history and was not taking any anticoagulants. Her family history was unremarkable. Her height was 151 cm and her weight was 65 kg. Her body temperature was 36.5 °C, his blood pressure was 130/75 mm Hg, and his pulse was regular at 72/min. Physical examination was

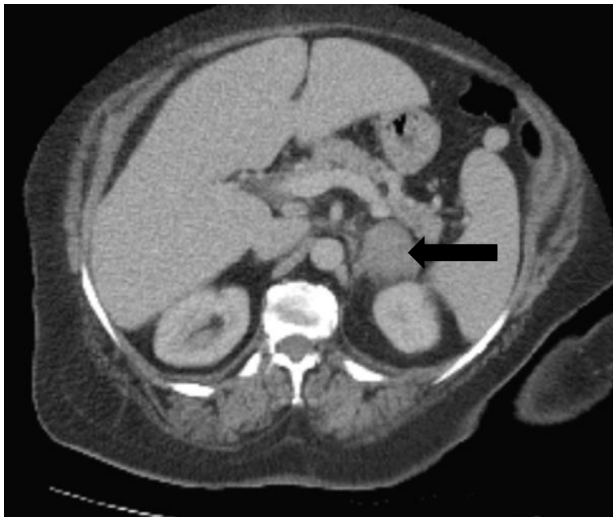

Fig. 1. Abdominal Tomography in July 2015: The mass about 4 cm.

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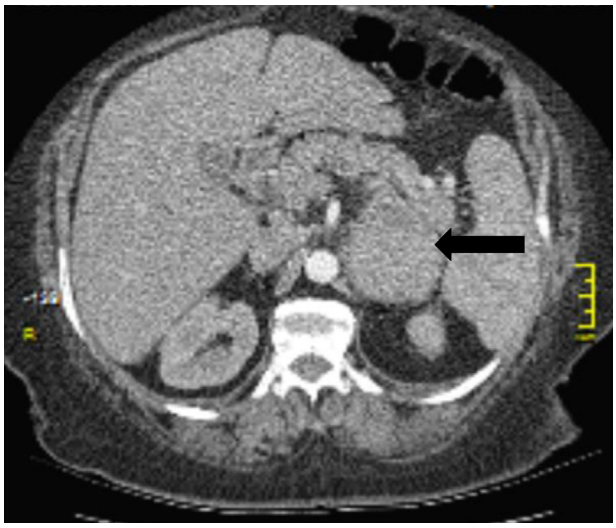

Fig. 2. Abdominal Tomography in August 2015: The mass about 7 cm.

normal. Complete blood count and biochemical tests and hormonal tests were within normal limits.

Control abdominal tomography was performed for this patient in August 2015. The tomography (CT) result demonstrated a 7.0 cm lesion which was bigger than the previous lesion (Fig. 2). Therefore, it was thought that the lesion may be malignant.

For the purposes of securing a definite diagnosis and treatment, a laparoscopic left adrenalectomy was performed in September 2015. This operation lasted about 90 min. The preoperative diagnosis was an adrenal tumor. The resected specimen was $10 \times 9 \times 6$ cm in size (Fig. 3). On histopathological examination revealed hematoma with normal adrenal tissue (Fig. 4). Neoplastic tissue was not observed. In the absence of any obvious ethology, the final pathological diagnosis was the idiopathic adrenal hematoma. The patient was discharged home on postoperative day 5. Follow-up was uneventful without complications.

3. Discussion

Adrenal haemorrhage is an uncommon condition that is of serious concern as it may result in adrenal insufficiency and death. Adrenal haemorrhage may be caused by several factors including infection, anticoagulants, trauma, surgery, and antiphospholipid syndrome [1]. Intrinsically, the adrenal gland is highly vascular and vulnerable to haemorrhage [2]. Small adrenal branches which originated from three main arteries of the adrenal gland form a subcapsular plexus and the gland is drained by relatively few venules. Some causes like stress increase adrenal vascularity and increases adrenal venous pressure because of vasoconstriction which results in intraglandular haemorrhage. Several signs are prominent during the initial stages of adrenal haemorrhage. Patients may present with fever, nausea, vomiting, weakness, dizziness, tachycardia, anorexia, fatigue, back pain, and epigastric pain [3,4]. Our patient presented with back pain as a presenting symptom. Before a surgical operation, it is difficult to diagnose idiopathic adrenal hematomas. Koizumi et al. described 14 cases of idiopathic adrenal hematomas from 1983 to 2010 in Japan [5]. Of these 14 cases, 13 had been suspected to be adrenal tumors including malignant lesions preoperatively but were then found to be 'idiopathic adrenal hematomas' on pathological examination after surgery. Only 1 patient was diagnosed with an idiopathic adrenal hematoma without surgery. The adrenal haemorrhage was not

Fig. 3. Cut surface of adrenal gland. $8 \times 6{,}5 \times 6$ cm sized haemorrhage area was seen within the gland.

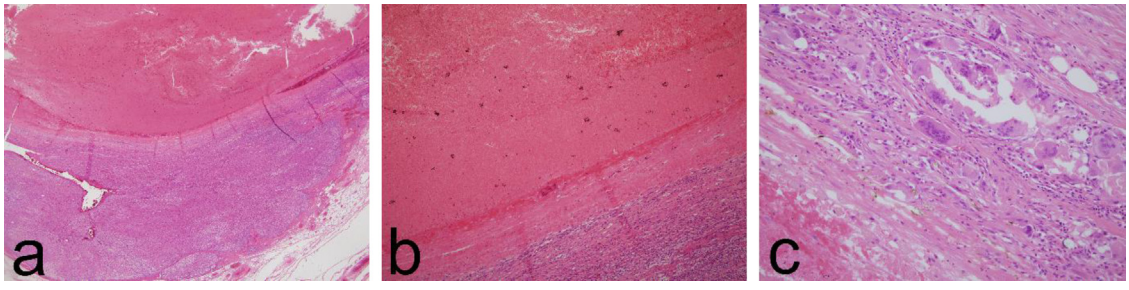

Fig. 4. Histopathological examination revealed a normal adrenal gland with a mass of haemorrhage (A). The haemorrhagic area is not covered with epithelial or endothelial cells (B). Fibrosis and foreign body type giant cell reaction is seen around the haemorrhagic areas (C).

suspected to be caused by an adrenal tumor on the basis of CT, hormonal assay and MIBG results, and this mass spontaneously regressed after 2 weeks [6]. Imaging modalities like CT and MRI are useful for detecting adrenal haemorrhage [7]. However, it is difficult to determine whether the haemorrhage is associated with tumors or not with these imaging modalities. Marti et al. [8] studied 133 cases of adrenal haemorrhage with associated masses. According to the result of this study, the most frequent mass associated with adrenal haemorrhage was pheochromocytoma (48%) while the second most frequent mass was a malignant lesion (20%) such as adrenocortical cancer or metastasis from another organ. Hematomas derived from pseudocysts or adenomas comprised 17% of all cases. Therefore, even if pheochromocytoma is ruled out by hormonal evaluations and imaging studies, the possibility that the mass may be a malignant lesion remains approximately 50%. Furthermore, the size of adrenal incidentalomas, which are adrenal gland masses discovered serendipitously on imaging, is an important factor in differentiating benign tumors from malignant lesions. Nieman [9] recommended routine surgical resection for adrenal incidentalomas >4 cm in diameter without a clear-cut diagnosis.

4. Conclusion

We report herein a case of idiopathic adrenal hematoma. An accurate diagnosis of idiopathic adrenal haemorrhage is quite difficult to make prior to surgery. An adrenal hematoma should be kept in mind when adrenal masses assessing.

Conflicts of interest

All authors declare that they have no conflict of interest and also the patient described in the case report has given their informed consent for the case report to be published.

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No funding sources.

Ethical approval

As this study is a case report, we did not have ethics committeeapproval as a policy of our institution.

Consent

The patient presented in this case report gave informed consent about publication.

Authors contribution

İbrahim Kılınç: Study design, data collection, manuscript writing.

Ersin G Dumlu: Data collection and analysis, radiologic investigations.

Vedia Öztürk: Data collection, data analysis.

Neslihan Çuhacı: Data analysis and collection.

Serdar Balcı: Data collection and analysis.

Abdussamed Yalçın: Data analysis and final manuscript reduction.

Mehmet Kılıç: Data analysis and final manuscript reduction.

Guarantor

İbrahim Kılınç is the guarantor of this case report study.

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