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CASE REPORT

MYELOLIPOMA OF THE ADRENAL GLAND IN A NIGERIAN WOMAN: A CASE REPORT AND A REVIEW OF THE LITERATURE

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CASE REPORT

A.O.I. is a 34-year-old lady who was found to have an elevated blood pressure during pregnancy two years prior to this presentation. There was no family history of hypertension or diabetes mellitus. She was quite obese weighing 110 kg with a body height of 5 ft 6 inch. Otherwise the physical findings were normal. Blood pressure fluctuated between 150 and 170 mmHg systolic and 100 – 120 mmHg diastolic. Ultrasonography done as part of the work-up for hypertension during pregnancy revealed a right suprarenal mass measuring 87 mm by 74 mm with a smooth outline and homogeneous hyperechogenicity. A subsequent contrast-enhanced CT scan of the abdomen revealed a cystic hypodense mass above the right kidney measuring 7.4 x 7.4 x 7.2 cm suggestive of a right suprarenal cyst (Fig. 1).

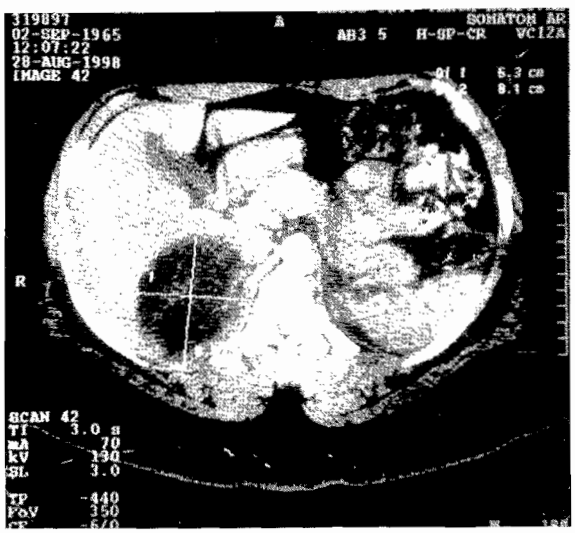

Fig. 1: CT scan of the abdomen revealing a cystic hypodense mass above the right kidney measuring 7.4 x 7.4 x 7.2 cm suggestive of a right suprarenal cyst.

A normal excretion was found in both kidneys. The differential diagnoses considered were hypertension in pregnancy, pre-eclamptic syndrome and phaeochromocytoma. Serum VMA was within normal limits. With the patient being on anti-hypertensive drugs, a right adrenalectomy was done via a transperitoneal approach under combined epidural and general anaesthesia. At operation, a huge yellowish right adrenal mass was removed. No other intra-abdominal abnormality was found. The patient had an uneventful postoperative recovery. Postoperative examinations did not reveal any other endocrine abnormality. A skull X-ray showed a normal cranial vault, sutures and sella with no intracranial calcification seen. Additional investigations of the patient did not reveal any other endocrine abnormality. The patient's blood pressure remained controlled on methyldopa, 500mg twice daily.

Gross Morphology: The mass was well capsulated, firm and of yellow-brown colour weighing 213 g and measuring 10.5 x 9 x 4.5 cm. The cut sections showed a yellowish soft background with haemorrhagic areas. No normal adrenal tissue was grossly identified. Microscopy showed residual normal cortical adrenal tissue compressed by the mass, which was composed of mature adipose tissue interspersed with clusters of haemopoietic cells including numerous megakaryocytes. No residual adrenal medulla tissue was identified. The

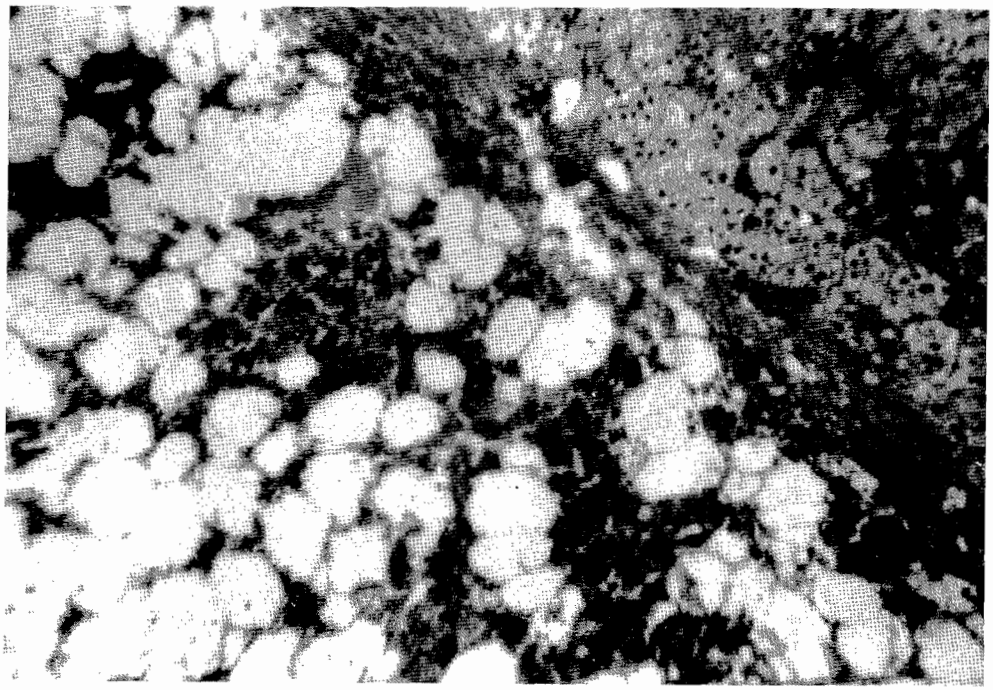

Fig. 2: Photomicrograph of the mass showing mature adipose cells compressing residual adrenal cortical tissue (x60)

compressed adrenal cortex consisted of normal vacuolated cortical cells (Fig. 2). The microscopic features are consistent with myelolipoma.

DISCUSSION

Myelolipoma is a benign non – functioning tumour of the adrenal gland, which is often discovered unexpectedly during investigations for other conditions. In a small number of cases acute pain may develop secondary to haemorrhage within or around the tumour in the retroperitoneal space[1]. The age at presentation of reported cases of adrenal myelolipoma ranged from 12 to 93 years, but the majority of patients were in the 50 – 60 year age group with equal sex distribution[2]. Our patient was 34 years old, which is within the reported age range.

Adrenal myelolipomas have been reported in association with obesity[3], hypertension and renal cell carcinoma[3-5]. Our patient was both obese and hypertensive. The reasons or implications of this association are, however, undetermined. It has been suggested that these may be coincidental findings as such conditions also occur frequently in this age group.

The exact aetiopathogenesis of adrenal myelolipoma is unknown, however, there are several theories about its pathogenesis. It has been suggested that it may be due to the regression of adrenocortical parenchymal nodes from trauma or impaired blood circulation[6] with preservation of residual lymphoid cells. Other hypotheses suggest its origin from autonomous proliferation of bone marrow cells transferred during embryogenesis[7] or possible metaplasia of mesenchymal cells or bone marrow emboli[8]. On the other hand, myelolipomas have been induced in rats by placing anterior pituitary tissue in the subcutaneous tissue along with injection of thyroxine and testosterone[9].

Though myelolipomas often present without clinical symptoms, the tumour was detected in our patient while she was being investigated for hypertension during pregnancy. However, it is possible that this may be one of the symptoms of myelolipoma as other cases have been reported in association with hypertension[3-5].

On computerized tomography, myelolipomas often present as an extra-renal encapsulated mass with tissue density of fat as seen in this case[10]. It is therefore possible to

misdiagnose it for other fatty tumours such as adrenal lipoma and liposarcoma[11].

Phaeochromocytoma was a differential diagnosis in our patient because of the association of hypertension with an adrenal tumour, but the endocrinological investigations and urinary VMA were all negative. In another report in which adrenal myelolipoma was associated with hypertension, associated bilateral adrenocortical hyperplasia were found[4]. In this case report, however, the affected adrenal showed compression atrophy while the other was normal. The exact association between this tumour and hypertension is still undetermined.

The treatment of choice for huge adrenal myelolipomas such as in our patient is adrenalectomy, even when it is asymptomatic, because of the possibility of spontaneous rupture and catastrophic haemorrhage[12]. Small asymptomatic tumours with characteristics of myelolipomas on CT scan could be treated conservatively with follow-up at regular intervals. Our patient was subjected to adrenalectomy and her blood pressure is controlled on anti-hypertensives.

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