

# Adrenal Myelolipoma - A Case Report

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## Introduction

Adrenal Myelolipomas are rare cortical, generally unilateral, non-functioning benign tumours of the adrenal gland. Histologically they are composed of fat and extramedullary hematopoietic elements. Less than 300 cases have been reported in the literature<sup>1</sup>.

## Case Report

A forty-year-old female with a slowly growing mass in the right hypochondrium over a period of 4 years was operated upon and a large soft tissue mass was removed. Preoperatively the mass had been diagnosed as a benign tumour with symptoms of mechanical compression. Radiographs and ultrasonography showed a large fatty mass between the right kidney and the right lobe of the liver. The surgical specimen of the tumour, which was removed intact, was sent for histopathological diagnosis. Grossly it was a soft, yellow-brown, well-circumscribed ovoid mass, measuring 20.0 cmsX13.0 cmsX7.0 cms. Histopathological examination revealed mature adipose tissue containing hematopoietic elements. A complete rim of atrophic adrenal cortical tissue was seen around the periphery.

## Discussion

Myelolipomas of the adrenal gland were first described in 1905 and are usually discovered by accident or at autopsy. Thus they are often classified as 'incidentaloma'. These tumours are more frequent in males 40-60 years old. Most adrenal Myelolipomas are small (diameter 4 cm) and asymptomatic (70%), but larger tumours may cause local symptoms secondary to mechanical compression<sup>2</sup>. Very large adrenal myelolipomas are exceedingly rare. They generally require no treatment; however, if symptomatic or if diagnosis is in doubt, surgery is needed. The pathogenesis of this benign tumour is still unclear<sup>3</sup>.

Adrenal myelolipomas are very rare benign tumours composed of an admixture of mature adipose tissue and normal hematopoietic cells. The incidence of adrenal myelolipomas at autopsy is low (0.2%)<sup>4</sup>. Generally unilateral on the right side and nonfunctional, their origin is unclear<sup>5</sup>. Different theories have been put forward, including development from rests of mesenchymal stem cells, embolism of bone marrow, extramedullary hematopoiesis and, according to the most widely accepted theory, metaplasia of the reticuloendothelial cells of blood capillaries. Due to their uncertain aetiology and low frequency, management of adrenal myelolipomas is usually individualised. The development of improved imaging techniques has increased their diagnosis in routine clinical practice<sup>4</sup>.

Although myelolipomas are most commonly found in the adrenal glands, extra-adrenal myelolipomas are well documented. They have been found in various sites, including mediastinum, liver, stomach, lungs, pelvis, spleen, retroperitoneum, presacral region, thoracic spine, testis and mesentery<sup>6,8</sup>.

Uncommon adrenal masses include cystic lesions (hydatid cyst, endothelial cyst), solid lesions (hemangioma, ganglioneuroma, angiosarcoma, primary malignant melanoma), and solid fatty lesions (myelolipoma, collision tumour). Most of these lesions do not have specific imaging features. A

preoperative diagnosis of myelolipoma is however possible as the macroscopic lipid content within an adrenal mass is theoretically characteristic of myelolipoma<sup>9</sup>. This diagnosis should be made with caution, especially when the lipid content is not predominant, because of the possible association with an adenoma<sup>6</sup>. Computed tomography is the most accurate method for pre-operative evaluation. Myelolipoma is difficult or impossible to detect at plain radiography, unless the lesion is large and predominantly fatty. At ultrasound myelolipoma often has a heterogeneous echogenicity due to its typically nonuniform architecture<sup>10</sup>. Once diagnosis has been established, a conservative treatment protocol is mandatory. The prognosis is generally excellent and recurrences have not been reported. On medline search cases have been reported from various parts of the world. Multiple case reports have been published from France<sup>9</sup>, Italy<sup>2,3</sup>, Spain<sup>4,5</sup>, Thailand<sup>1</sup> and USA<sup>6-8</sup>.

### **Acknowledgement**

Prof. N.A. Jafarey, Vice Chancellor, Ziauddin Medical University, Karachi; Consultant Histopathologist, Sindlab, Karachi.

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