

## Incidental Adreno-Cortical Adenoma, why Surgery? a Case Report

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**Introduction:** Incidental adrenal tumors are commonly benign, but reports demonstrate that if the characteristics of the tumor are not clear, on images surgery is the procedure of choice. Our objective through this case is to show that laparoscopic adrenalectomy is a safe approach for adrenal incidental tumor regardless of radiological findings.

**Case report:** A 52 year-old female with arterial hypertension (HBP), cramps, and back pain at right side, probably related to her chronic back pain history. She went for check up and a left adrenal mass on MRI described as myelolipoma was found incidentally. Laboratories were unremarkable except aldosterone and cortisol levels were slightly elevated. She was treated for hypertension for about a year. The patient underwent to a successful laparoscopic left adrenalectomy, after which the patient blood pressure was stable with out any medications, and the aldosterone and cortisol levels decreased. The pathological report was adrenal cortical adenoma with central hemorrhage and not a myelolipoma as described in images on magnetic resonance imaging (MRI).

**Conclusion:** The use of imaging for diagnosis, clinical management and decision making is very controversial. Laparoscopic surgery for adrenal masses is a safe procedure for tumors of 6 cm regardless of the radiological description. [*P R Health Sci J* 2010;2:130-132]

*Key words:* Adrenal, Adenoma, Laparoscopic surgery

**A**drenal cortical adenoma is a benign tumor of the adrenal gland with an incidence of 2.85% (1). Most of these tumors over 85% are commonly benign. Even if previous reports indicates that 1-5% of all cases, computed tomography (CT) scan that are obtained for any other reason demonstrated an adrenal mass (2).

We report an unusual case of a female with an adrenal mass incidentally found on CT scan at first and corroborated by MRI with a myelolipoma characteristics and presenting HBP, cramps, and right side back pain that finally pathological report were an adenocortical adenoma. This case sensitizes the importance of surgery in patients with adrenal mass versus follows up with imaging on suspicious adrenal tumors, especially when the images characteristics are not clear.

### Case report

A 52 year-old female patient goes to routine check up. Hypertension was diagnosed, at that time back pain and cramps also presented. For this reason the patient was treated for hypertension with Cozaar 100 mg daily for about a year. The adrenal mass was first found incidentally on a CT scan observed

first on CT scan when patient goes for a cholecystectomy. She then underwent to MRI a left adrenal mass of 3.5 cm was found with pyramidal shape with lipid rich characteristics. These characteristics were more favor to myelolipoma than typical adenoma. The right adrenal gland was unremarkable in size and morphology. The aldosterone levels at first evaluation was on 23.3. Cortisol levels were slightly increased 25.27, ACTH low (5pg/ml), renin within normal values 1.98. There was no electrolyte imbalance. She was referred to our center for evaluation. After evaluation rather than wait for another imaging study in 3-6 months we decided to proceed with to a laparoscopic left adrenalectomy. No complication was reported during procedure, and the hospital stay was 3 days with out perioperative complications. The patient was discharged from the hospital with out any medication. All laboratories post left

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adrenalectomy were within normal values, aldosterone levels decreased to 13.8 ng/dl, and cortisol levels decreased to 15.57 ug/dl. No evidence of high blood pressure post operatively without any medication. The final pathology described an adrenocortical adenoma, with central hemorrhage, measuring 6x 3.5 x 2.5 cm and weighting 22 g. There was glistening of the external surface fatty tissue. When sectioned it revealed a yellow soft surface and central cystic change and hemorrhage. Consequently no other treatment besides than surgery was indicated in this case.

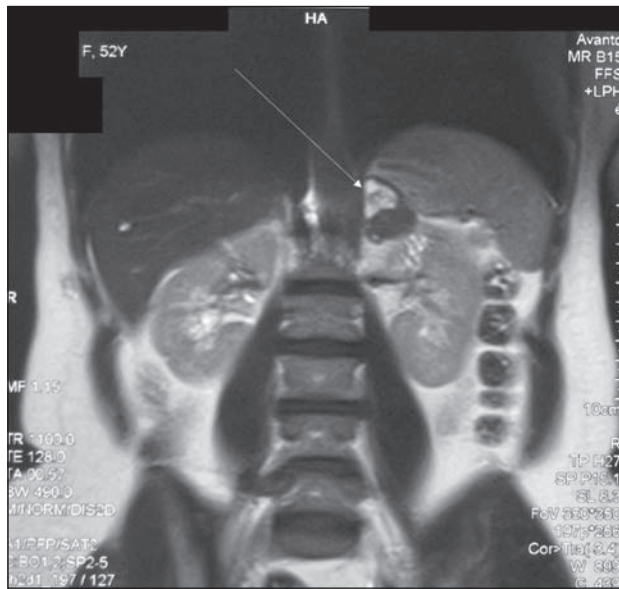


Figure 1. MRI shows left adrenal mass.

## Discussion

Most adenomas have a lipid characteristics but this is not a reliable parameter to use for clinical decision making (1). In this case the patient does not present any other symptom than high blood pressure first onset, with back pain at right side and slightly increased adosterone and cortisol levels was then found. Initial CT scan and MRI presented a left adrenal mass with a rich fatty component that was suspicious for myelolipoma. On final pathological final report an adrenal cortical adenoma with central hemorrhage was revealed. As reported on previous journals, the identification of fat tissue on adrenal mass on image is very important to differentiate from other lipid rich tumors that can be present in adrenals and can result in malignant tumors (1-3). As reported by several series the size of the adrenal mass is very important to decided if the tumor can be excised or not. Since the imaging can underestimated the real size of the tumor, the excision is mandatory in cases of hyper functioning adrenal masses, in the presence of suspect radiological malignancy, in cases of discordant computed tomography (CT) and when the maximum diameter is 4 cm or more (4-5).

On the other hand, studies have suggested the effectiveness and safety of laparoscopic adrenalectomy in patients with high blood pressure caused by the adrenal tumor (6-9). In this case the patient underwent to an early laparoscopic adrenalectomy without further observation. The results after surgery were remarkable with no use of any antihypertensive medication and normal aldosterone and cortisol levels. In conclusion the use of the imaging only to, diagnose and manage patient still very controversial. The early use of laparoscopic surgery for adrenal masses is the procedure of choice for any adrenal mass smaller than 6 cm with questionable imaging.

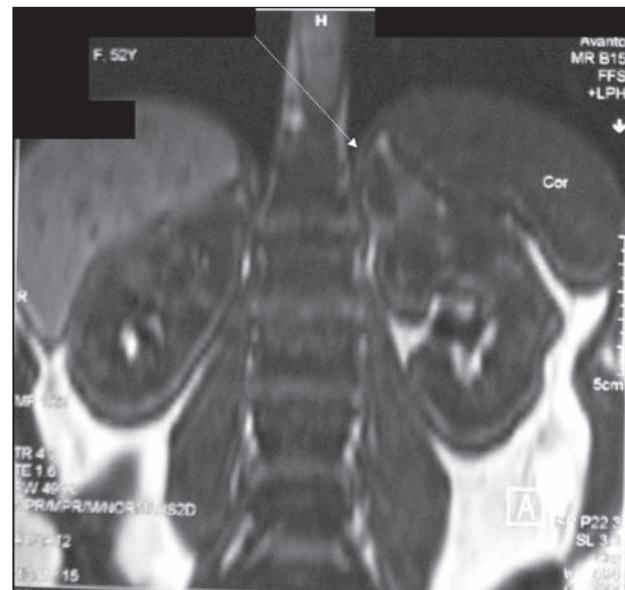


Figure 2. MRI, left adrenal gland mass displaying a pyramidal shape.



Figure 3. MRI closer view of left adrenal mass.

## Conclusion

Early laparoscopic surgery represents an effective alternative for patient with incidental adrenal tumors regardless of imaging findings.

## Abbreviations

MRI - magnetic resonance imaging, ACTH - adrenal corticotrophin thyroid hormone, CT scan - computerized tomography.

## Resumen

**Introducción:** Los tumores suprarrenales fortuitos son comúnmente benignos, pero los informes demuestran que si las características del tumor no están claras en las imágenes, la cirugía es el tratamiento de opción. Nuestro objetivo a través de este caso es demostrar que la adrenalectomía laparoscópica es un acercamiento seguro para el tumor fortuito suprarrenal sin continuar realizando seguimiento con estudios radiológicos. **Presentación del caso:** Paciente femenina de 52 años con hipertensión, calambres, y dolor de espalda en lado derecho, que se relacionó con su historia crónica de dolor de espalda. La paciente fue a su chequeo de rutina y una masa suprarrenal izquierda en MRI descrita como myelolipoma fue encontrada incidentalmente. Los laboratorios de rutina se mantuvieron normales solo la aldosterona y el cortisol se elevaron levemente. La paciente fue tratada por la hipertensión por un año. La paciente fue a cirugía en donde se removió la masa suprarrenal por laparoscopia la cual fue exitosa. Luego de cirugía el paciente no tuvo que utilizar ningún medicamento para la hipertensión, y los niveles de aldosterona y cortisol disminuyeron. El informe

patológico fue adenoma cortical suprarrenal con hemorragia central no un myelolipoma como se describió en las imágenes radiológicas. **Conclusión:** El uso de los estudios radiológicos solamente para diagnóstico, manejo clínico y toma de decisiones es muy polémica. La cirugía laparoscópica para las masas suprarrenales representa un procedimiento seguro para los tumores de 6 cm. sin importar la descripción radiológica.

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