Adrenalectomy in adrenal hematoma, atypical presentation of incidentaloma. Case report and literature review.

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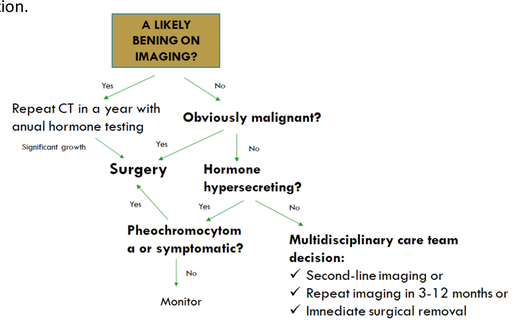
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Introduction.

Adrenal incidentalomas (AI) are findings of >1 cm, found in studies of imaging in asymptomatic patients. Its prevalence is 2% in the general population,
it is difficult to estimate the incidence. The incidence of malignancy is up to 12%. The incidentaloma approach is based on ruling out malignancy and hyperfunctionality.

Objective.

Present a case of adrenal incidentaloma with an atypical presentation, whichnhad changes in size during the preoperative evaluation.



Flowchart: Management for adrenal incidentaloma

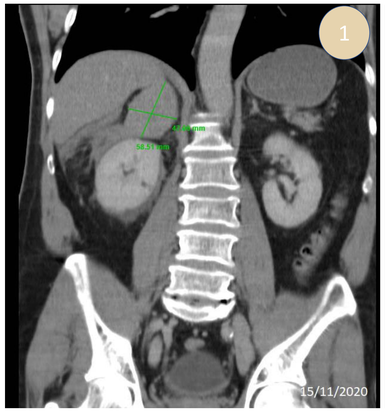
Clinic case.

A 65-year-old male with a history of arterial hypertension of 4 years of evolution presented to the emergency department with abdominal pain and hypertensive uncontrolled; with loss of 8 kg in 2 months.

A CT scan was requested and found a right adrenal tumor of 63x70x44mm of heterogeneous characteristics, solid with fat striation and 59 HU in simple phase with contrast enhancement to 63 HU in venous phase and 70 HU in arterial phase, as well as a hematic collection in perirenal space.

Endocrinology evaluation was requested, where no hormonal dysfunction was identified, malignancy was suspected, so 24-hour ULC was requested, urine metanephrines (total 152, metanephrines 27, normometanephrines 125). Oncology evaluation was requested due to high suspicion of malignancy, indicating biopsy of the lesion, which was not performed due to risk of complications.

It was programmed as open adrenalectomy due to the risk of malignancy and during hospitalization a new CT scan was requested, where a decrease of 27x22x21mm and a volume of 6.5cc with 19 HU in simple phase was observed, increasing to 22 HU after contrast.
Lipid-poor adenoma was considered as a diagnosis and laparoscopic adrenalectomy was performed.



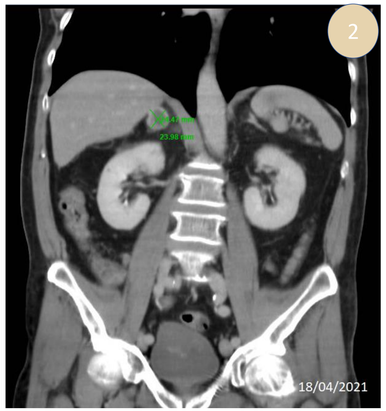


Figure 1: Nov/15/2020 tumor of 63x70x44 mm with 70 HU venous fase. Figure 2: April/18/2021 tumor of 27x22x21mm and a volume of 6.5cc with 19 HU.

Laparoscopic procedure was performed, findings in cavity with multiple adhesions and a subcapsular hematoma in the right adrenal with a tumor of 2x3cm, vascular control of the adrenal vein was performed with hem-o-lok and dissection with bipolar energy, drainage was placed in the surgical bed.

The patient evolved adequately and was discharged on the second postoperative day. The anatomopathological result was adrenal adenoma with hemorrhage, ischemic necrosis and hemosiderin deposits together with abundant adipose tissue with vascular congestion and calcifications.

Discussion

Adrenal incidentalomas (AI) are findings of >1 cm, found in studies of imaging in asymptomatic patients.
Its prevalence is 2% in the general population, it is difficult to estimate the incidence. The incidence of malignancy is up to 12%. The incidentaloma approach is based on ruling out malignancy and hyperfunctionality; the latter is reported in 20% of the incidentalomas, being the autonomous secretion of cortisol (CAS) most frequently.

Imaging studies should be requested to start the diagnostic and therapeutic approach. Contrasted CT is the initial imaging study that guides treatment, a lesion <10 HU can be classified as an adenoma, lesions between 10-20 are borderline since up to 30% adenomas can be found and contrast washout can be used to classify them.

Adenomas present contrast enhancement with lavage rapid (absolute washout > 60% or relative washout > 40% at 15 min). The suggestive AI´s of malignancy have measures >4cm and with >20 HU.

The biochemical study should include screening for pheochromocytoma (metanephrines in urine), hypercortisolism (urinary free cortisol) and primary hyperaldosteronism (aldosterone/renin).

Surgery is the treatment of first choice for AI´s that are functioning and in diagnosis.
or suspicion of malignancy. The approach must be by a multidisciplinary team. The
Laparoscopic adrenalectomy is the procedure of choice but open procedure is preferred in case of malignancy with local invasion.

Conclusions

The characterization of AI´s by means of imaging studies and HU measurements is important for the diagnostic and therapeutic approach, the malignancy data are tumors >4 cm HU > 20.

In this case the tumor met the malignancy criteria. However, when performing a second control tomography, changes suggestive of lipid-poor adenoma and hematoma were found, which caused pain and changes in dimensions and HU.

In this case, the pre-surgical approach was important, which allowed us to carry out laparoscopic surgery and offer its benefits to the patient.

References:

1. Anil Kapoor, MD, FRCSC;* Topher Morris, BMSc;* Ryan Rebello. Guidelines for the management of the incidentally discovered adrenal mass. Canadian Urological Association. 2011.
2. Lee JM, Kim MK, Ko SH, Koh JM, Kim BY, Kim SW, et al. Clinical guidelines for the management of adrenal incidentaloma. Endocrinol Metab (Seoul). 2017;32(2):200–18.
3. Fassnacht M, Arlt W, Bancos I, Dralle H, Newell-Price J, Sahdev A, et al. Management of adrenal incidentalomas: European Society of Endocrinology Clinical Practice Guideline in collaboration with the European Network for the Study of Adrenal Tumors. Eur J Endocrinol [Internet]. 2016.
4. William F Young, Jr, MD, MSc, Electron Kebebew, MD, FACS. Evaluation and management of the adrenal incidentaloma. November 2022.
5. Marissa Maas, Nima Nassiri, Sumeet Bhanvadia, John D. Carmichael. Discrepancies in the Recommended Management of AdrenalIncidentalomas by Various Guidelines. 2021.

PEMEX
POR EL RESCATE DE LA SOBERANÍA