OSSEOUS METAPLASIA IN ADRENAL MYELOLIPOMA: SECOND DOCUMENTED CASE IN HUMAN LITERATURE

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INTRODUCTION

- Adrenal myelolipomas are rare benign tumors
- Composed of mature adipose and hematopoietic tissue
- Autopsy prevalence: 0.08%–0.4%
- Osseous metaplasia within myelolipoma is extremely rare
- Only a few cases reported in the literature
- This study reports a case of adrenal myelolipoma with osseous metaplasia
- Evaluates its clinical and pathological characteristics

CASE PRESENTATION

75 Y/O, F, + HTN, DM, HLD, Presented with left flank pain

Imaging: MRI abdomen: left adrenal mass, Size: 5.8 × 5.1 × 4.8 cm (Figure 1A–C)

Workup: Blood tests negative for functional hormonal tumor

Management: Uneventful robotic hand-assisted adrenalectomy

Pathology: Encapsulated adrenal mass, 7.5 × 6.0 × 5 cm, Weight: 78 g, Hemorrhagic and fatty areas consistent with adrenal myelolipoma, Osseous metaplasia, calcification, and fibrosis present (Figure 1D)

Outcome: Uncomplicated postoperative course, Discharged on postoperative day 2

DISCUSSION

- Adrenal myelolipomas account for 2–4% of adrenal tumors
- Etiology remains unclear: likely metaplasia of reticuloendothelial blood capillaries or bone marrow cell embolism and hypertrophic reticulum cells
- Most commonly discovered incidentally
- CT scan is most sensitive for detecting fat-containing tumors
- Majority are hormonally inactive only~10% hormonally active

Osseous Metaplasia in Myelolipoma

- Extremely rare pathology
- Reported in conditions such as: Vitamin A deficiency, Neoplasia, Stress, or Chronic inflammation
- Observed in adrenal cortex of the two-toed sloth with erythroid and myeloid elements
- Only one similar case reported in human literature