Depression or Deception? Identifying Adrenocortical Carcinoma Behind Mood Disorders

Tahminah Kausar, M.D., Haider Khan, M.D., Divya Samat, M.D, Danishwar Mahmood, M.D, Kaitlin Tarconish, D.O.
Department of Internal Medicine

Introduction:

Adrenocortical carcinoma is a rare disease, and approximately 60% show signs and symptoms of hormone excess. Clinical symptoms associated with glucocorticoid excess usually develop very rapidly and can be wide ranging. Here, we present the case of an elderly female who initially presented with sudden onset mood symptoms and was ultimately diagnosed with terminal adrenocortical carcinoma.

Case Presentation:

71-year-old female was initially seen in the clinic for an acute change in mentation. Three weeks ago, the patient's husband noticed an overnight change from her previously active lifestyle. Patient was visibly depressed and apathetic, and reported sleep disturbances, anhedonia, reduced appetite, fatigue and psychomotor agitation. There was no prior history of mood disorders, and this sudden deterioration prompted investigation for an organic cause while concurrent treatment with an SSRI was initiated. Within a few days, the patient presented to the ED with abdominal pain and worsening mood manifestations. She was lethargic and withdrawn to her surroundings, and repeatedly replied, ‘I don't know’ to the doctor’s questions.

CT brain was unremarkable, as was the infectious work-up and basic metabolic panel. Abdominopelvic imaging revealed two heterogeneously enhancing upper abdominal masses measuring 11.2x7.7 cm and 12.1x9.7cm with metastasis to the liver. IR-guided biopsy yielded a diagnosis of adrenal cortical neoplasm. Multidisciplinary team was engaged to discuss surgical resection versus systemic therapy. Psychiatry evaluation revealed a slight improvement, and they too recommended continuation of the sertraline. Understandably, she found it difficult to cope with the diagnosis and cancer related pain. Endocrine work-up showed elevated AM serum cortisol (42.5 & 55.6 mcg/dl), 24-hour urinary cortisol (1031.4 mcg/24hr) and 24-hour urinary cortisone (461.2 mcg/24hr). Adrenocorticotrophic hormone (ACTH) was depressed (<5 pg/ml). The Pheochromocytoma work-up was unremarkable. On subsequent admission, CT showed pneumoperitoneum without peritoneal signs or hemodynamic instability. Given the extent of metastatic disease, this was managed conservatively with eventual transition to hospice care.

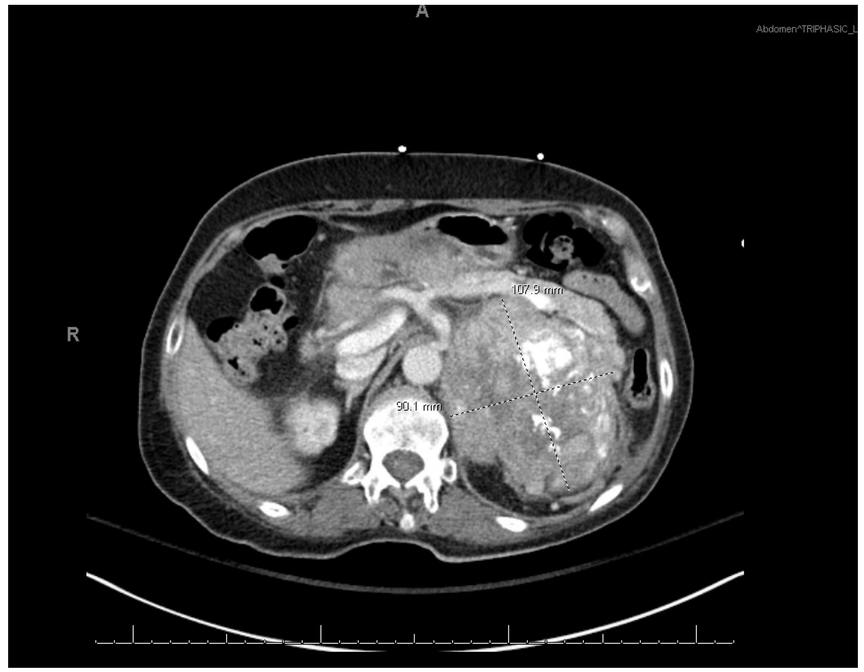

Figure: CT Abdomen and Pelvis showing 2 heterogenous masses 11.2 x 7.7 cm and 12.1 x 9.7 cm left adrenal mass.

Discussion:

This case highlights the need to consider depression and other mood disorders as potential early indicators of adrenocortical neoplasms. In this patient, hypercortisolism presented as significant behavioral changes rather than more classic signs like moon facies, hypertension, or insulin resistance. This underscores the diagnostic challenge of recognizing such underlying malignancies early, as timely identification can significantly enhance patient outcomes.

References:

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