Adrenocorticotrophic Hormone-Independent Macronodular Adrenal Hyperplasia Treated with Bilateral Laparoscopic Adrenalectomy

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Abstract

Introduction: Macronodular adrenal hyperplasia is a very rare cause of hypercortisolism, occurring in less than 1% of endogenous Cushing's syndrome cases. Patients have adrenal glands that weigh five times that of normal and contain nodules greater than 5 mm in diameter.¹

Materials and Methods: We present a case report of a 57-year-old man who developed progressive weight gain and uncontrolled type 2 diabetes. Laboratory workup included a positive overnight dexamethasone suppression test and undetectable adrenocorticotrophic hormone (ACTH). Abdominal MRI showed numerous bilateral adrenal nodules with adrenal glands measuring up to 8 cm.

Results: The patient underwent a bilateral transperitoneal laparoscopic adrenalectomy. The adrenal glands were enlarged bilaterally, with multiple benign-appearing yellow macronodules. Postoperatively, the patient's insulin requirements have diminished significantly, and his physical appearance is slowly normalizing.

Conclusions: Macronodular adrenal hyperplasia is a rare cause of Cushing's syndrome that usually presents with subclinical symptoms or on incidental imaging. Our case is unusual due to the virulence of the patient's symptoms. Although bilateral adrenalectomy obligates the patient to take life-long exogenous steroids, it provides significant clinical improvement by allowing titration of steroids to mimic a physiological state.

The authors have nothing to disclose.

Runtime of video: 5 mins 22 secs

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Reference

1. De Venanzi, et al. Primary bilateral macronodular adrenal hyperplasia. *Curr Opin Endocrinol Diabetes Obes* 2014;21:177–184.

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