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A Successful Resection of a Giant Adrenal Myelolipoma Measuring 35x33x13 cm and Weighing 4600 grams: A Case Report & Review of Literature

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Background: Adrenal myelolipomas are rare nonfunctional tumors that are mostly asymptomatic and often found incidentally. They can be associated with other endocrine disorders like pheochromocytoma, and congenital adrenal hyperplasia (CAH). Adrenal myelolipoma usually measures from 2-4 cm in diameter, although large tumors measuring more than 10 cm can be found.

Case Presentation: We report a case of a 33-year-old female patient with a history of bilateral adrenal myelolipoma associated with CAH who was complaining of flank fullness, constipation, amenorrhea, excessive thirst, recurrent headaches and a massive increase in weight. Computed tomography (CT) scan of the abdomen showed a huge right adrenal mass measuring 35X33X13 cm displacing the right kidney inferiorly, the pancreatic head, the second part of the duodenum, and the Inferior Vena Cava (IVC) medially. Adrenalectomy was deemed too risky and challenging to perform and thus declined by many hospitals before the patient was admitted to our hospital, where excision of right adrenal myelolipoma was done under general anesthesia with successful results.

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Discussion: Giant myelolipomas occur in rare cases, often considered when the mass measures more than 10 cm in diameter with the largest reported case of adrenal myelolipoma in a patient with CAH being of size: 34 × 24 × 10.5 cm; weight, 5900 g, as opposed to our case which measured 35x33x13 cm and weighed 4600 grams.
In the case of bilateral myelolipoma, the recommendation is to remove the larger or symptomatic mass and monitor the contralateral side. The literature stated that myelolipomas can grow significantly in size during the observation period likely due to increased ACTH stimulation. While studies report a maximum tumor growth of 1.4 cm annually, in this case, the patient had experienced an overwhelming tumor growth from 16x12 cm to 32x20.4x15.1 in a period of 2 years only.
Bilateral adrenalectomy may be considered in such cases, though caution is advised if adrenal myelolipoma is associated with uncontrollable CAH, as removal of both adrenal glands may result in an increase in ACTH concentration, which may promote the growth of ectopic adrenal rest tumors, such as the testicles, impairing fertility.

Conclusion: This case emphasizes the importance of weighing the risks and benefits of planned bilateral adrenalectomy, particularly in CAH patients who typically present with bilateral adrenal myelolipoma, which can grow massively in size and become hardly operable, it also highlights the importance of individualizing treatment according to patient presentation.

Keywords: large adrenal myelolipoma, adrenalectomy, bilateral adrenal myelolipoma, congenital adrenal hyperplasia.

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