Answer

Adrenal Myelolipoma

The patient underwent a diagnostic laparoscopy that revealed a mass of 6.0 × 5.0 × 2.5 cm arising from the right adrenal gland. An uncomplicated laparoscopic right adrenalectomy was performed. Pathologic examination showed the tumor mass was composed of mature adipocytes with interspersed hematopoietic marrow containing immature myeloid and erythroid precursors, mature granulocytes, and megakaryocytes, consistent with an adrenal myelolipoma. The patient tolerated the procedure well without complications, and his abdominal pain has completely resolved.

Adrenal myelolipomas are rare, benign, nonfunctioning tumors composed of mature adipose tissue and scattered hematopoietic elements. Ultrasonography, CT, and MRI are effective in diagnosing adrenal myelolipomas in more than 90% of cases, with CT being the most sensitive diagnostic imaging modality.[1] Most are asymptomatic and identified incidentally during radiologic studies. The prevalence of an adrenal incidentaloma at autopsy is less than 1% for patients younger than 30 years, but increases to 7% in patients aged 70 years or older.[2] Differential diagnosis of a fatty adrenal mass includes teratoma, lipoma, liposarcoma, and angiomyolipoma. The incidence of adrenal myelolipomas is 0.03% at autopsy.[2] Although usually small (<5 cm), they can reach massive size and become symptomatic. Adrenal myelolipomas have been reported to present with abdominal and flank pain, palpable mass, or hematuria that are predominantly the result of tumor necrosis or hemorrhage. While hormonally inactive, these tumors have been reported to coexist with hormonally active conditions such as pheochromocytoma, Cushing syndrome, and congenital adrenal hyperplasia resulting from 21-hydroxylase deficiency.[3] Extraadrenal myelolipomas have also been reported to occur in approximately 15% of cases, with approximately 50% occurring in the presacral area and the remainder in the thorax, retroperitoneum, pelvis, kidneys, liver, and stomach.[3]

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