

Adrenal gland teratoma in a 40-year-old woman

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ABSTRACT

Teratoma is a germ-cell tumor that commonly affects the gonads. Extragonadal teratoma is a rare entity. Teratoma in the region of adrenal gland is a rare and uncommon retroperitoneal tumor; only few cases have been reported. This case report describes such a tumor in a 40-year-old-woman who presented with multiple vague complaints. Ultrasonography of the abdomen showed a mixed echogenic mass with areas of calcification in right supra-renal region and a lymph nodal mass in the right renal hilar region. Computed tomography showed a mass containing fat, calcification and soft tissue component in right supra-renal region indenting the superior pole of kidney. Intraoperatively a supra-renal tumor was found within in a pseudocapsule that covered most of the tumor with a part of duodenum fixed to the mass.

CASE REPORT

A 40-year-old female had been visiting different hospital with series of multiple vague complaints like chest pain, headache, excessive fear, dizziness for past 3-4 years. Batteries of tests were carried out such as blood investigations, thyroid function test, renal function test etc. which all yielded negative results. She was then referred to psychiatry department where she was diagnosed to have somatoform disorder and was receiving treatment accordingly. Finally after few months she landed up in our department for ultrasonography as she had presented with pain over left lumbar region and left hypochondrium.

An ultrasound scan showed a mixed echogenic mass with hypoechoic areas and calcifications in right supra renal region with retrocaval extension. The tumor mildly displaced the kidney inferiorly. A lymphnodal mass was also seen at right renal hilum. CT revealed a right suprarenal mass measuring approximately 9x8x5 cm. The mass was mainly fat containing with soft tissue and calcific components. Post- contrast studies showed no particular pattern of enhancement (Fig. 1-2).

In view of the possibility of malignant nature of the tumor such as liposarcoma, the patient underwent laparotomy

and abdominal exploration. Intraoperatively supra renal mass was found with retrocaval, retro-aortic extension and upto the crux of diaphragm. The mass was also seen fixed to a part of the duodenum.

Histological examination revealed a mature teratoma. Mature adipose tissue, smooth muscle bundles, and glands with mucin production were also noted. Dystrophic Calcification and ossification were seen focally. The adrenal gland was present at the periphery of the tumor. The patient's condition was stable after the operation and was discharged uneventfully.

DISCUSSION

Teratomas are congenital tumors thought to arise from pluripotent embryonal cells.¹ Teratomas can occur in almost any region of the body, but are most commonly found in paraxial and midline locations.² Reports of teratomas in the region of the adrenal gland are rare in literature.³ Lipomatous tumors of the adrenal gland are also not commonly seen. They include lipoma,

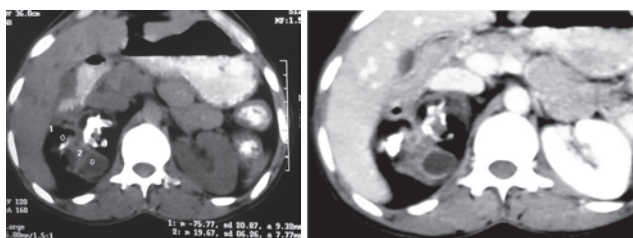


Fig. 1. CT axial section at level of adrenal gland showing heterogeneously enhancing mass lesion containing fat, calcification and soft tissue component

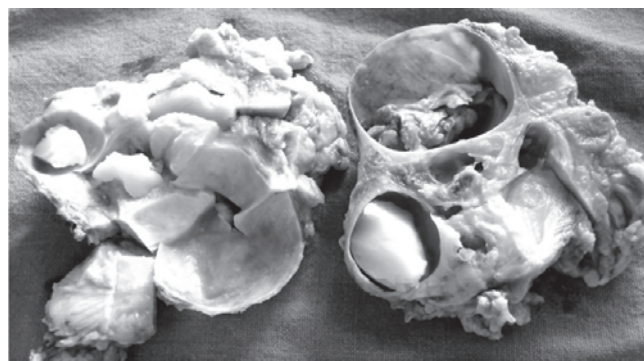


Fig. 2. Cut section of the specimen showing cystic spaces containing pultaceous and mucoid material with areas of cartilage and bony tissue. Periphery shows compressed adrenal tissue

myelolipoma, teratoma, angiomyolipoma, and liposarcoma.^{4,5} These patients are asymptomatic and often present with non-specific complaints.^{6,7}

Retroperitoneal teratomas are more common during childhood than at other time, and they are rare entity in adults.^{8,9} Malignant change is also more commonly found in adults than in children (26.0% vs 10.0%).^{8,10} Abdominal radiograph may demonstrate mass with fat with either calcification or bone. Similarly, ultrasonography shows uncomplicated fluid and calcification. Fat is not reliably distinguished from other soft tissue components by ultrasonography. CT demonstrates a heterogenous mass containing well-circumscribed fluid component of variable volume, adipose tissue or sebum in form of fat-fluid level, and calcification.¹¹ MRI may demonstrate the characteristic signal of fat (hyperintensity) and water (hypointensity) in T1-weighted images.

The presence of calcification is more common in teratomas than in other lipomatous tumours. Calcification in myelolipomas is not as common as in teratomas.¹² The presence of calcification in adrenal lipomas is also an uncommon finding. CT images of angiomyolipoma demonstrate mainly fatty component and tiny soft tissue densities interspersed within the tumor. Calcifications are also rare in angiomyolipomas.

Liposarcoma is most common adult form of soft tissue sarcoma and may present on CT imaging with cystic, muscle, or fat density.

The 40-year-old lady in our case had an incidental finding of retroperitoneal lipomatous tumor in which the possibility of malignancy, such as liposarcoma, could not be excluded. Surgical resection was thus performed and histopathological report confirmed it as teratoma. Primary retroperitoneal teratoma is unusual in patients above the age of 30 years; only 10.0% have been reported

to occur after that age.¹³ Incidental finding of teratoma occurring in the region of adrenal gland in a 77-year-old man has also been reported.¹⁴ Thus teratoma should be considered in differential diagnosis of adrenal lipomatous tumours – in all age groups.

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