CASE REPORT

Perirenal Castleman’s Disease Mimics an Adrenal Calcified Tumor: Computed Tomographic Appearance

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Castleman’s disease is a rare, benign neoplasm of lymphoid proliferation. It usually occurs in the thoracic cavity, and is uncommon in the retroperitoneum. We present a rare case of Castleman’s disease in the perirenal space simulating a solid calcified adrenal tumor. In a review of the literature about this rare tumor, perirenal Castleman’s disease has rarely been described.

Key words: Castleman’s tumor, lymph node

CASE REPORT

A 55 year-old man was admitted to our hospital with the complaint of intermittent low back pain for about one year. Medical history, physical examination results and routine laboratory values were unremarkable. However, the KUB revealed a well-defined soft tissue mass of 6 cm at its greatest diameter that contained scattered, dense, amorphous calcifications in the right upper quadratate (Fig. 1). Computed tomography showed that it was a large homogeneous enhanced mass with dense, streaky and amorphous calcifications in the right suprarenal region (Fig. 2). To exclude the possibility of neuroectodermal tumors such as carcinoid, neuroblastoma, pheochromocytoma, paraganglioma before operation, I-131MIBG adrenal scintigraphy was performed which showed no abnormal uptake of radioactivity in the whole body. At surgery, a 6 × 5 × 4 cm well-encapsulated mass in the right supra-renal region adhering to the right adrenal gland (Fig. 3) was found. Surgical removal of the mass and adrenalectomy were performed. Histological examination of the excised mass revealed centrally hyalinized lymphatic follicles surrounded by stroma-proliferating capillaries with multiple foci of dense calcifications. The final diagnosis was Castleman’s disease of the hyaline-vascular type (Fig. 4). The right adrenal gland adjacent to the mass was intact.

Postoperative convalescence was uneventful. At the 3-year follow-up examination, the patient was doing well without recurrence.

DISCUSSION

Castleman’s disease (CD) was categorized by Justrabo [5] into three groups according to the location of the tumor: mediastinal, superficial (including cervical, axilla, or
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on computed tomography (CT), CD is usually a solid mass of homogenous attenuation and exhibits strong homogenous enhancement in smaller tumor (<5 cm) after administration of intravenous contrast material, especially the hyaline vascular type [15-17]. However, larger tumors (>5 cm) usually show heterogeneous enhancement and attenuation when correlated with central necrosis and degeneration [22]. CT is helpful in the evaluation of the morphology of calcifications. Angiographically, CD appears as a hypervascular tumor supplied by dilated feeding arteries with dense capillary blush [15, 18]. Vessel encasement, amputation, or tumor vessels are rare. Magnetic resonance (MR) imaging of CD shows a mass lesion with homogeneous low signal intensity on T1W images and higher signal intensity on T2W images [7, 10, 19]. However, MRI does not offer additional specific features to permit the diagnosis of this disease.

Figure 1. KUB shows a soft tissue mass in the upper right quadrant of the abdomen, with dense, scattering, amorphous calcifications.

Figure 2. a. Pre-enhanced CT demonstrates a large well-defined mass with dense, streaky and amorphous calcifications in the right perirenal space. b. Contrast-enhanced CT shows the mass is moderately enhanced.

Figure 3. Photograph of the gross tumor shows an egg-like capsulated mass with calcifications (white arrows) attaching to the adrenal gland (black arrows).
Our patient presented with a large, well-defined, strongly enhanced mass with streaky calcifications in the suprarenal region, simulating a calcified adrenal tumor. It was unique because of the extremely rare location, but it showed typical radiological and CT findings of CD. The differential diagnosis includes perirenal space calcified masses that lie within the anterior (Gerota) and posterior (Zuckerkandl) renal fascia, such as adrenal carcinoma, pheochromocytoma, malignant fibrous histiocytoma and other retroperitoneal sarcoma. To our knowledge, CD is not listed in the differential diagnosis of the perirenal mass lesions listed in any textbook. Although it is rare, CD should be included in the differential diagnosis of the perirenal masses with smooth outlines and homogeneously strong contrast enhancement, especially those with the streaky and dense calcifications.

REFERENCES
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腎臟周圍的卡斯耳文氏症疑似腎上腺
鈣化腫瘤：病例報告

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卡斯耳文氏症為罕見之良性淋巴增生，常好發於胸腔內而較少發生於後腹膜內。此文為
報告一發生在腎上腺旁之卡斯耳文氏症，其含有豐富鈣化，疑似腎上腺鈣化腫瘤。雖然此
病例極為罕見，然而其影像特徵為界定清楚的實塊，強烈同質性對比增強且含有散佈性
的鈣化，卡斯耳文氏症必須列入鑑別診斷。

關鍵詞：卡斯耳文氏症，後腹膜，淋巴結