Neuroblastoma - A Common Retroperitoneal Tumor in Children

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Neuroblastoma are solid extracranial tumors that commonly affects children. They account for nearly 8-10% of all cancers in children and arise from undifferentiated neural crest precursor cells that differentiate into sympathetic nervous system. Commonest location is abdomen (65%) while least is the cervical (5%) (1). Mostly they are sporadic while in some there is a familial association with autosomal dominant inheritance (2).

A six year girl was referred for ultrasonographic examination of abdomen with history of pain abdomen and vague mass upper abdomen. The examination of abdomen revealed heterogenic retroperitoneal mass in left suprarenal area with foci of calcifications displacing left kidney. They mass extended over the midline to the aorta (Fig 1, 2). Other organs were normal. Histopathology examination latter on proved it to be neuroblastoma.

Ultrasonography has relative role in evaluation of retroperitoneal masses but the vascular invasion can be well demonstrated. CT and MR imaging play important role in demonstrating characterization, extent and involvement of adjacent or distant structures (3). Retroperitoneal masses are either mesodermal, neurogenic germ cell ectoderm or lymphatic in origin. Children have different spectrum than adults. Neuroblastoma, paraganglioma, rhabdomyosarcoma, benign teratoma and lymphoma are common tumors in children. Coarse, amorphous, mottled calcification, crossing of midline encasement of great vessels and displacement of kidney are ultrasonographic findings in neuroblastoma. Paraganglioma have increased catecholamine levels. Sarcoma are large with heterogeneous appearance. Lipoblastoma have visible fat contents. While teratoma can be cystic, solid or mixed with fluid, fat, fat-fluid level with calcification. Lymphomas are more homogenous and rarely have calcification and necrosis.

References

1 Magu S, Mishra DS, Gulati SP, Marwah N, Kakkar V, Sukhija R. Case report of primary cervical neuroblastoma with intracranial extensions in 7 year male. Ind J Radiol Imaging 2000;10:31-2
