



Existent Malignant Lesion A Case Report

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Key words:

ABC, Aneurysmal bone cyst, WT, Wilms' tumor, Scintigraphy, CT scan, MRI.

Abstract:

An aneurysmal bone cyst (ABC) is a benign, expansile, non-neoplastic lesion of the bone, characterized by channels of blood and spaces that are separated by fibrous septae. Giant ABC is an uncommon condition and can be difficult to handle because of the destructive effect of the cyst on the bones and the compressive effect on the nearby structures, especially in weight-bearing bones of the body commonly affecting the younger age group. Here, we present a case of a bone lesion in the left proximal femur of a six-year-old child, who had a previous history of right-sided Nephrectomy due to Wilms' tumor (WT). Follow-up computed tomography of the abdomen revealed a peritoneal metastatic deposit, abdominal lymphadenopathy & additional expansile osteolytic lesion at the proximal left femur and considered all as metastatic deposits. Magnetic resonance imaging of the left hip demonstrated an expansile multiloculated heterogeneously enhancing cystic lesion with a fluid-fluid level in the upper shaft of the left femur typical for ABC (Aneurysmal bone cyst). At the same time, the scintigraphy report shows it's a neoplastic lesion. Finally, the biopsy report confirmed it's a benign lesion which correlates with the MRI findings. Despite its rarity, metastatic Wilms' tumor to bone should be considered in a child though in WT metastasizes to bones very late. So, benign-appearing bone lesions are sometimes misdiagnosed as metastatic lesions may arise difficulty in diagnosis, management & treatment plans due to the co-existence of other pathologies.

Introduction:

A malignant lesion such as Wilms' tumor (WT) accounts for up to 95% of renal tumors in children and is, therefore, the most common abdominal malignancy of childhood affecting one in 10,000 children. Approximately 1.3% of patients with WT develop bone metastasis. On the other hand, an aneurysmal bone cyst (ABC) is a benign, expansile, non-neoplastic lesion of the bone, characterized by channels of blood and spaces that are separated by fibrous septae. Giant ABC is an uncommon condition and can be difficult to handle because of the destructive effect of the cyst on the bones and the compressive effect on the nearby structures, especially in weight-bearing bones of the body commonly affecting the younger age group. There

is no association between ABC & Wilms' tumor (WT) but WT can metastasize to the bone.

Case report:

We report a case of the bone lesion in the left proximal femur of a six-year-old child, who had a previous history of right-sided nephrectomy due to Nephroblastoma. Two years later after the nephrectomy, this patient presented with pain in the left hip for four months duration, along with difficulty in walking. Then X-ray and CT scan was done and found an expansile osteolytic lesion at the proximal left femur, peritoneal metastatic deposit and abdominal lymphadenopathy considered all as metastatic deposits though nephroblastoma metastasizes to bones very late.

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After that, an MRI of the left hip joint was performed and found an expansile multiloculated cystic lesion with a fluid-fluid level in the upper shaft of left femur typical for ABC. At the same

time, the scintigraphy report shows it's a neoplastic lesion. But finally, the histopathology report suggests it as a benign lesion that correlates with the MRI findings typical for ABC.

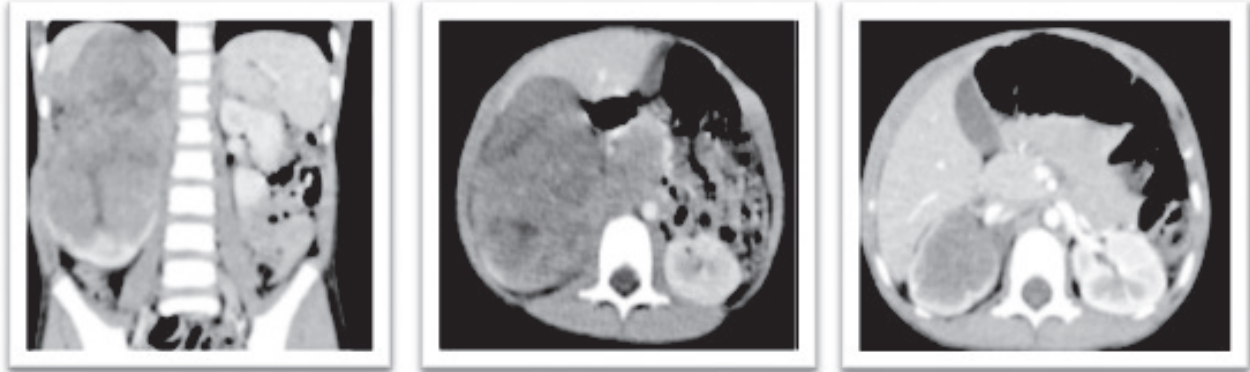


Fig.-1: Heterogeneously enhancing right renal mass diagnosed as a Nephroblastoma in a 4 years old child.

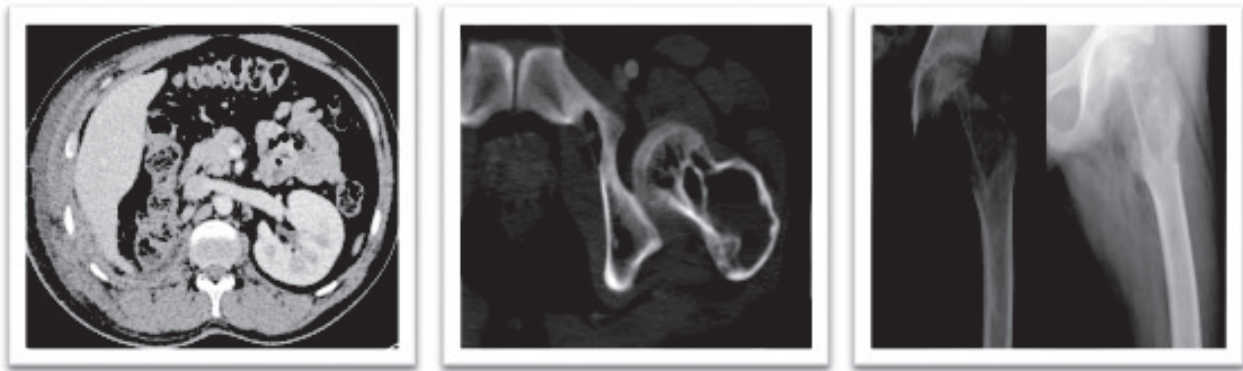


Fig.-2: Post nephrectomy state of the same patient developing bony lesion in left proximal femur 2 years later.

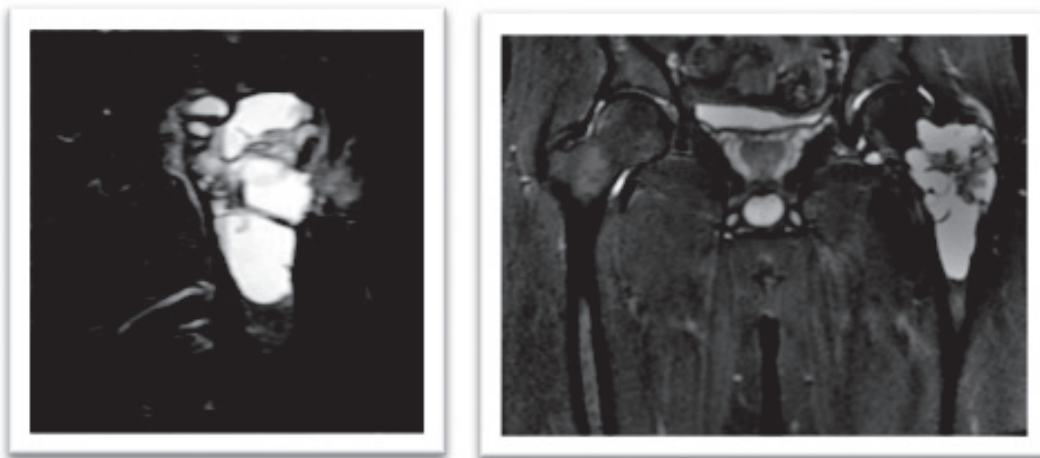


Fig.-3: Sagittal (A) and coronal (B) MRI STIR image showing expansile multiloculated cystic lesion with a fluid-fluid level in proximal left femur.

Discussion:

Wilms' tumor accounts for the majority of renal tumors in children. National Wilms Tumor Study (NWTs 1-5) database shows (0.44%) developed bone metastasis. Bone metastasis is rare in patients with WT, occurring more commonly in progression or relapse than at initial diagnosis. We present a case of a 6 years old male who was previously diagnosed as a case of Wilms' tumor post nephrectomy and chemoradiation state but returned to the hospital with left hip pain along with difficulty in walking. Follow-up computed tomography of the abdomen revealed a peritoneal metastatic deposit, abdominal lymphadenopathy & additional expansile osteolytic lesion at the proximal left femur and considered all metastatic deposits. Magnetic resonance imaging of the left hip demonstrated an expansile multiloculated heterogeneously enhancing cystic lesion with a fluid-fluid level in the upper shaft of the left femur typical for ABC (Aneurysmal bone cyst). At the same time, the scintigraphy report shows it's a neoplastic lesion. Finally, the biopsy report confirmed it as a benign lesion which correlates with the MRI findings.

Metastatic WT bone lesions appear as osteolytic bone lesions or geographic bone destruction & poorly-defined margins on radiography but in our patient, the bone lesions represented as an expansile multiloculated heterogeneously enhancing cystic lesion with a fluid-fluid level in the upper shaft of the left femur & diagnosed as a benign lesion. Despite its rarity, metastatic Wilms' tumor to bone should be considered in this case at first, so benign-appearing bone lesions are sometimes misdiagnosed as the metastatic lesion may arise difficulty in diagnosis, management & treatment plan due to the co-existence of other

pathologies. Successful management necessitates meticulous attention and collaborative effort among pediatric oncologists, specialist surgeons, radiation oncologists, pathologists and radiologists.

Conclusion:

A patient having a malignant lesion can atypically present with a benign bone lesion and should be treated carefully. If it is considered & treated as a metastatic deposit, in such a case, the destructive tumor processes in the bone continue & further bone destruction will cause pain, fracture of the bone, immobility of the patient eventually overall failure of the management plan, A condition of co-existence of both these pathologies is a rare finding & difficult in diagnosis, treatment & management plan.

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