

Case Report

Displaced Kidney Simulating a Pelvic Mass on Bone Scintigraphy

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Abstract. Pelvic kidney is a common renal ectopy and can present a diagnostic challenge on bone scintigraphy. We present a case of a 48 year old female with breast cancer who was found to have an intense focus of MDP uptake anterior to the lower lumbar spine on planar bone scintigraphy. An abdominal CT later demonstrated that a large liver cyst is displacing the kidney infero-medially into the pelvis.

Keywords: Pelvic kidney, liver cyst, bone scintigraphy

Radionuclide bone scintigraphy is a commonly employed procedure to detect suspected bone metastases in a variety of cancers [1, 2]. It is also used for the investigation of many benign musculoskeletal conditions [1, 2]. Bone scans are very sensitive, but less specific. In order to increase the specificity, it is important to reduce misinterpretation with a comprehensive knowledge of and experience with normal variants and the other patterns, which may mimic metastases or other musculoskeletal pathology [2–6]. Pelvic kidney is the most common type of renal ectopy, with an incidence of 1 in 500 to 1 in 2000 cases and can present a diagnostic challenge in interpreting a bone scan [7]. The pelvic kidney is usually a unilateral phenomenon, and located in the true pelvis, and can mimic a tumor or possible metastatic focus

on planar imaging that may require further delineation (as in this case) with additional diagnostic imaging [8, 9].

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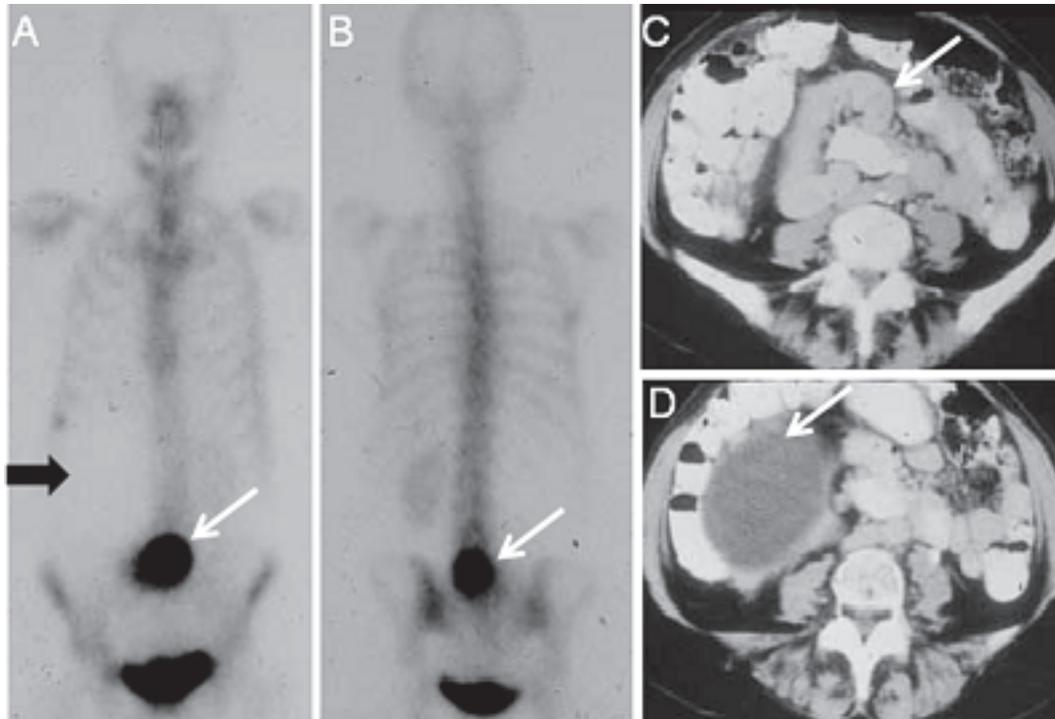


Figure 1: Planar bone scintigraphic images showing intense uptake anterior to the lower lumbar spine mimicking a midline metastasis in this patient with breast cancer (white arrows in A, B). Note is also made of a “missing” right kidney and a relatively photon deficient right hemi-abdomen (bold arrow in A). An abdominal CT scan subsequently demonstrated a midline pelvic kidney in the lower lumbar region (arrow in C) as well as a large liver cyst (arrow in D) causing displacement of the right kidney from its normal position infero-medially into the pelvis.

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