



# An Interesting Case of Fornix Rupture Discovered Accidentally on Bone Scintigraphy

*Kemik Sintigrafisinde Tesadüfen Saptanan İlginç Bir Forniks Rüptürü Olgusu*

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## Abstract

A 62-year-old male patient, with bladder carcinoma, was referred to our institution for Technetium-99m methylene diphosphonate bone scintigraphy to assess for bone metastasis. While the bone scan showed no abnormal uptake, extraosseous uptake was detected in the left perirenal and pelvic regions on the whole body scan. Computed tomography showed fornix rupture and demonstrated tracer pooling in the perirenal collection. Our diagnosis was very consistent, and oriented the therapeutic attitude towards a percutaneous drainage for the perinephric urinary leak.

**Keywords:** Urinoma, bone scintigraphy, bladder carcinoma

## Öz

Mesane karsinomu olan 62 yaşında bir erkek hasta, kemik metastazını değerlendirmek üzere Teknesyum-99m metilen difosfonat kemik sintigrafisi için kurumumuza sevk edildi. Kemik taramasında anormal tutulum görülmezken, tüm vücut taramasında sol perirenal ve pelvik bölgelerde ekstraosseöz tutulum tespit edildi. Bilgisayarlı tomografi, forniks rüptürü ve perirenal koleksiyonda radyoaktivite birikimi gösterdi. Tanımız oldukça tutarlıydı ve tedavi yaklaşımımızı perinefrik idrar kaçağı için perkütan drenaja yönlendirdi.

**Anahtar kelimeler:** Ürinom, kemik sintigrafisi, mesane karsinomu

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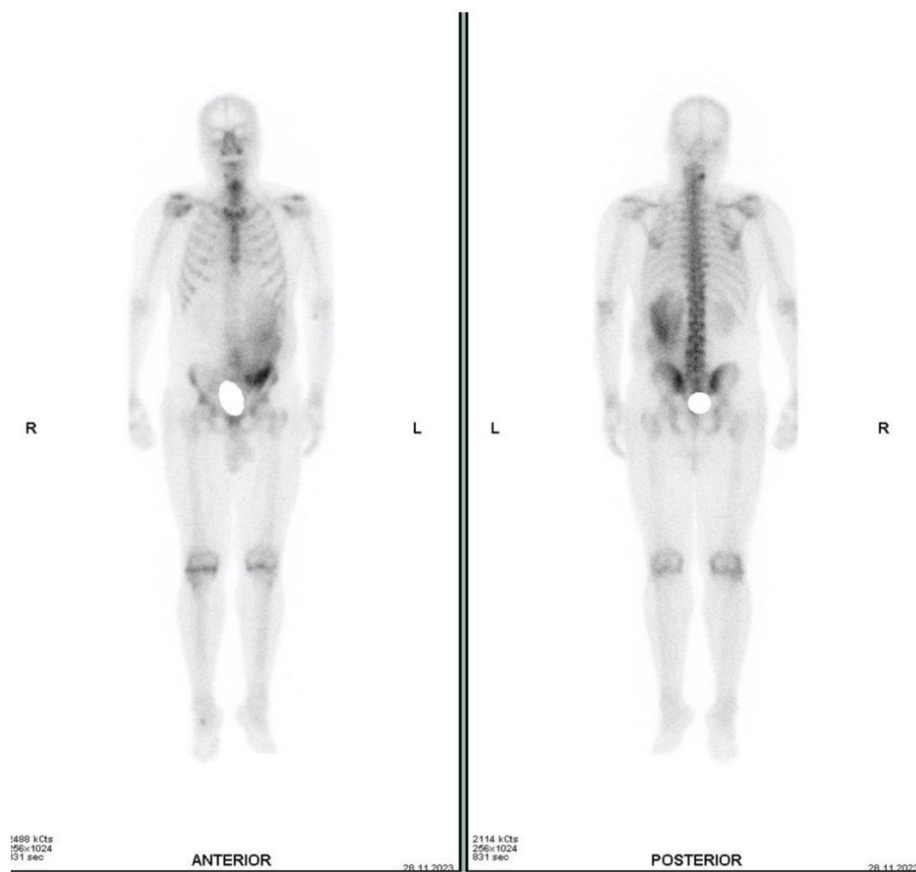
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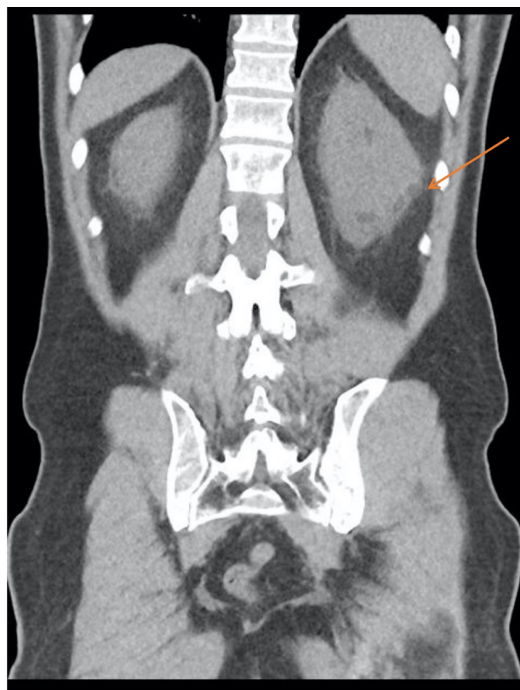
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**Figure 1.** Urinary collecting system rupture, leading to perirenal or retroperitoneal urine extravasation, is a rare complication often associated with urinary tract obstruction. A urinoma refers to a localized accumulation of urine in the retroperitoneum, outside the urinary tract, and typically occurs due to injury to the urinary system wall. Ureteral obstruction caused by a bladder tumor represents a rare cause of urinoma (1). We report an interesting case of a 62-year-old man with a history of bladder carcinoma, referred to our institution for bone scintigraphy as part of the initial staging of his neoplastic disease. Bone scintigraphy with Technetium-99m hydroxymethylene diphosphate in planar anterior and posterior views revealed an area of extraosseous uptake in the left perirenal and pelvic regions, likely related to fornix rupture, with no suspicious hypermetabolic foci suggestive of bone metastasis (Figure 1).



**Figure 2.** A history of mild abdominal pain in the left flank was reported. Our diagnosis was confirmed by an abdominopelvic computed tomography scan, showing fornix rupture with perirenal collection consistent with perirenal leak (Figure 2). Next day, the therapeutic approach towards percutaneous drainage was indicated for our patient.

Urinoma is a rare pathology linked to ureteral obstruction (commonly due to calculi) (2). It may also result from retroperitoneal fibrosis, pelvic mass, ureteropelvic junction obstruction, and pregnancy (1). Ureteric obstruction by neoplasm is a rare cause of spontaneous urinary leak and it is not typically detected via bone scintigraphy (3). However, the presence of radiotracer excretion outside the genitourinary tract can help in diagnosing urinary leaks (4). Incidental findings of urinary leaks have been reported in literature with others radiotracers which are normally excreted by the kidneys such as: Fluorine-18 fluorodeoxyglucose and iodine-123 metaiodobenzylguanidine, (5). The significance of this case lies in the unexpected discovery of a urinary leak during oncologic evaluation via bone scintigraphy.

## Ethics

**Informed Consent:** The institutional review board of our institute “Med V Military Teaching Hospital” approved this publication, and the requirement to obtain informed consent was waived.

## Footnotes

### Authorship Contributions

Concept: S.N.O., A.D., A.D., Design: S.N.O., A.D., A.D., Data Collection or Processing: S.N.O., A.D., A.D., Analysis or Interpretation: S.N.O., Y.B., A.D., Literature Search: S.N.O., O.A.S., Writing: S.N.O.

**Conflict of Interest:** No conflicts of interest were declared by the authors.

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