Interesting Image

Mol Imaging Radionucl Ther ***DOI:****10.4274/mirt.galenos.2026.37233*

[Epub Ahead of Print]

An Exceptional Presentation of Hutch Diverticulum on Bone Scintigraphy

Kemik Sintigrafisinde Hutch Divertikülünün İstisnai Bir Görünümü

Laila El Asraoui, Hasnae Guerrouj, Ayat Mouaden, Imad Ghfir

National Institute of Oncology Sidi Mohamed Ben Abdellah, Clinic of Nuclear Medicine, Rabat, Morocco

Abstract

Hutch diverticulum (HD) is a rare congenital condition characterized by the herniation of the bladder's mucosa and submucosa through the detrusor muscle fibers, encountered more commonly in children. An association between HD and situs inversus totalis (SIT) in an elderly patient has not been reported previously in the literature. We present the case of a 70-year-old male referred for routine bone scintigraphy as part of staging for lung carcinoma; thoraco-abdomino-pelvic computed tomography confirmed the staging and revealed a total transposition of the thoracic and abdominal organs, confirming SIT. This case highlights the exceptional association of HD and SIT, which was discovered incidentally in an elderly patient during metastatic staging for lung cancer. It underscores the importance of careful interpretation of scintigraphic findings, particularly when unusual radiotracer uptake is observed.

Keywords: Bone scintigraphy, Hutch diverticulum, situs inversus totalis

Öz

Hutch divertikülü (HD), mesane mukozasının ve submukozasının detrusor kas liflerinden fıtıklaşmasıyla karakterize nadir bir doğuştan gelen durumdur ve daha çok çocuklarda görülür. Yaşlı bir hastada HD ve situs inversus totalis (SIT) birlikteliği literatürde daha önce hiç bildirilmemiştir. Bu yazıda, torako-abdomino-pelvik bilgisayarlı tomografi ile doğrulanmış akciğer karsinomu evrelemesi kapsamında rutin kemik sintigrafisi için sevk edilen ve torasik ve abdominal organların tam transpozisyonu saptanarak SIT tanısı konulan 70 yaşındaki bir erkek hasta sunulmaktadır. Bu olgu, akciğer kanserinin metastatik evrelemesi sırasında tesadüfen saptanan, yaşlı bir hastada HD ve SIT'nin istisnai birlikteliğini vurgulamaktadır. Ayrıca, özellikle olağandışı radyofarmasötik tutulumu gözlendiğinde sintigrafik bulguların dikkatli yorumlanmasının öneminin altını çizmektedir.

Anahtar Kelimeler: Kemik sintigrafisi, Hutch divertikülü, situs inversus totalis

Address for Correspondence: Laila El Asraoui, National Institute of Oncology Sidi Mohamed Ben Abdellah, Clinic of Nuclear Medicine, Rabat, Morocco
E-mail: lailaa.elasraoui@gmail.com **ORCID ID:** orcid.org/0000-0003-4328-1853
Received: 07.01.2026 **Accepted:** 10.06.2026 **Epub:** 01.07.2026

Cite this article as: El Asraoui L, Guerrouj H, Mouaden A, Ghfir I. An exceptional presentation of Hutch diverticulum on bone scintigraphy. Mol Imaging Radionucl Ther. [Epub Ahead of Print]

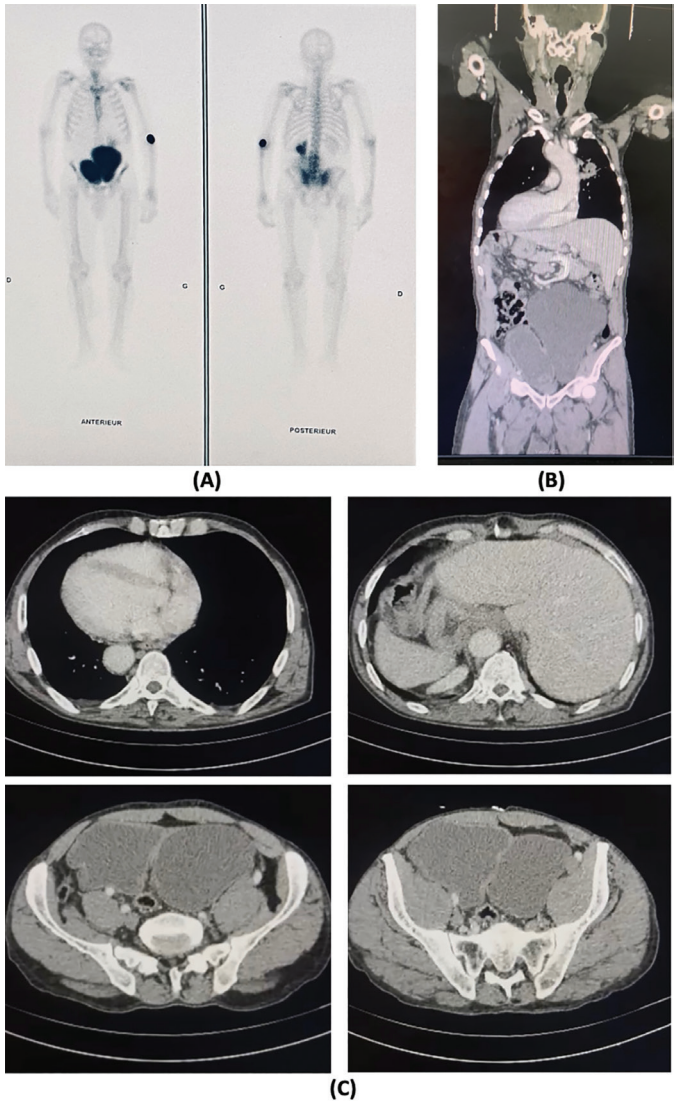

Figure 1. Hutch diverticulum (HD) is a rare congenital bladder diverticulum caused by herniation of the mucosa and submucosa through weakened detrusor muscle fibers, related to a congenital defect of Waldeyer's fascia (1). HD is typically diagnosed in childhood and is uncommon in adults, accounting for approximately 34% of reported cases (2,3). It may remain asymptomatic or present with complications such as urinary tract infection, lithiasis, rupture, or malignant transformation (2). We report the case of a 70-year-old man who was referred to our department for routine bone scintigraphy as part of lung carcinoma staging. Whole-body bone scintigraphy, acquired two hours after intravenous injection of 740 MBq of ^{99m}Tc-MDP, shows no abnormal skeletal uptake suggestive of bone metastasis. An incidental, intense radiotracer accumulation is observed in the left paravesical region, suggestive of a bladder diverticulum (A). Contrast-enhanced thoraco-abdomino-pelvic computed tomography showed a large bladder diverticulum arising from the left posterolateral wall, supporting the diagnosis of HD (C). Additionally, it revealed a total transposition of abdominal and thoracic viscera with a mirror image of internal organs attesting the diagnosis of situs inversus totalis (SIT) (B) and representing an exceptional association which was never reported in the literature. Single photon emission computed tomography/computed tomography can be considered an alternative imaging modality for diagnosis. The patient was then referred to the urology department for appropriate treatment.

SIT is a rare congenital condition resulting from abnormal left-right axis determination during embryogenesis and associated with mutations in genes affecting ciliary function, such as *DNAH5* and *DNAI1*. HD has been reported in association with several congenital and connective tissue disorders, including Ehlers-Danlos, Williams-Beuren, Menkes, occipital horn, and cutis laxa syndromes (4). Only one pediatric case describing the association of HD and SIT has been previously reported (5). To our knowledge,no case was reported in the literature about this association in adult patients. Indeed, HD occurs in children with male predominance and only 34% incidence in adult patient (3); while HD and SIT are distinct entities, differential diagnoses should be considered before concluding this rare association. Bladder diverticula may arise secondary to chronic bladder outlet obstruction, neurogenic bladder dysfunction, or aquired structural abnormalities. Similarly, misinterpretation of abdominal situs in cross-sectional imaging could result from malrotation syndromes rather than true SIT (6). This case suggests that particular attention should be given by the nuclear physician when interpreting scintigraphic examinations, particularly when there is an unusual uptake of the radiotracer.

Ethics

Informed Consent: Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Footnotes

Authorship Contributions

Concept: L.E.A., I.G., Design: L.E.A., I.G., Data Collection or Processing: L.E.A., I.G., Analysis or Interpretation: L.E.A., H.G., A.M., I.G., Literature Search: L.E.A., I.G., Writing: L.E.A.

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

Financial Disclosure: The authors declare that this study has received no financial support.

References

1. Hutch JA. Saccule formation at the ureterovesical junction in smooth walled bladders. J Urol. 1961;86:390-399.
2. Telli O, Guclu AG, Haciyev P, Burgu B, Gogus C. A rare entity in adults: bilateral Hutch diverticulum with calculi. Can Urol Assoc J. 2015;9:E343-E344.
3. Palmero Martí JL, Ramirez Backhaus M, Alvarez Barrera A, Amoros Torres A, Benedicto Redon A. Hutch bladder diverticula: a very uncommon entity in adults. Arch Esp Urol. 2012;65:636-639.
4. Sammour ZM, Gomes CM, de Bessa J Jr, Pinheiro MS, Kim CA, Hisano M, Bruschini H, Srougi M. Congenital genitourinary abnormalities in children with Williams-Beuren syndrome. J Pediatr Urol. 2014;10:804-809.
5. Chen J, Liu F, Tian J, Xiang M. Laparoscopic bladder diverticulectomy in a child with situs inversus totalis: a case report and literature review. Front Surg. 2022;9:1009949.
6. Fulcher AS, Turner MA. Abdominal manifestations of situs anomalies in adults. Radiographics. 2002;22:1439-1456.