

Artifact of the Quarter

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Study: Technetium-99m- (^{99m}Tc) glucoheptonate Renal Scintigraphy

Dose: 7.7 mCi

Collimator: low-energy all-purpose

Gamma Camera: Portable, standard field-of-view*

Images: 90 min delayed cortical images, 300K cts/image

HISTORY

The patient, a 12-yr-old female with spastic diplegia, bladder and bowel incontinence secondary to a previously resected astrocytoma of the spinal cord, undergoes intermittent bladder catheterization every 4 hr. She presented with fever up to 39.2°C, pyuria, and leukocytosis. A ^{99m}Tc -glucoheptonate scintigram was performed to rule out pyelonephritis.

ARTIFACT

There is a linear defect in the medial aspect of the left kidney suggesting the possibility of renal disease. However,

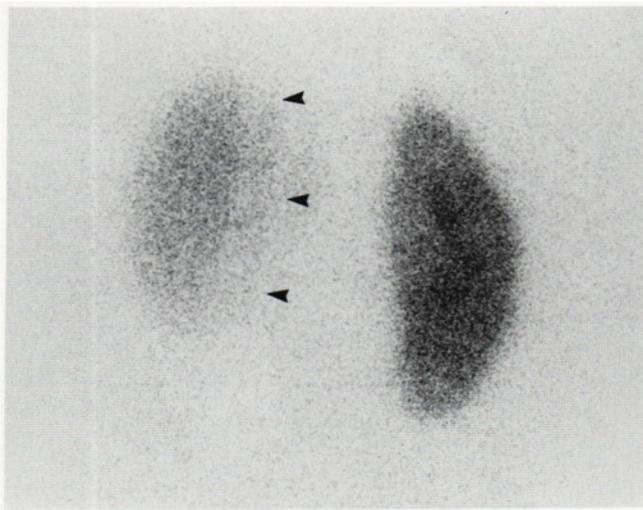


FIG. 1. Right posterior oblique delayed cortical image. Arrows mark the linear defect in the left kidney that was due to the patient's metallic Harrington rods.

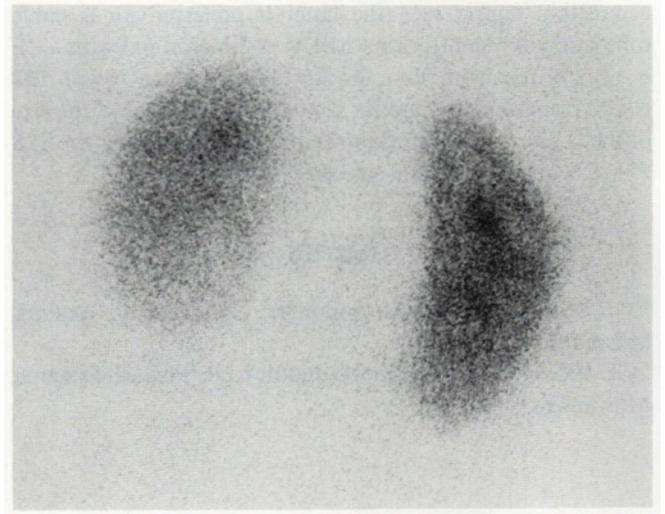


FIG. 2. Posterior delayed cortical image.

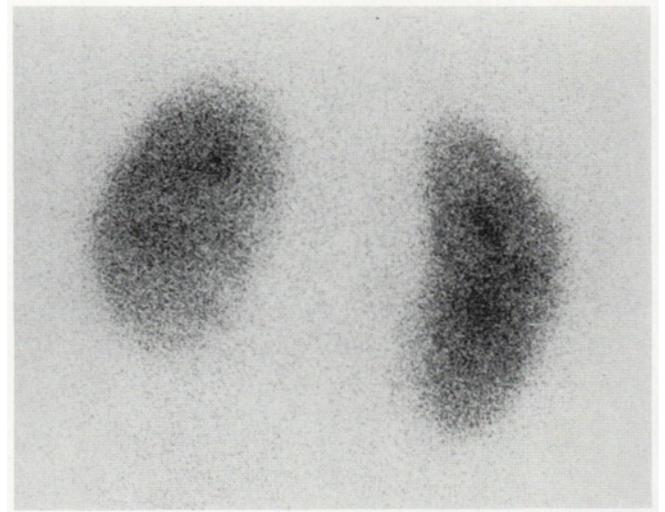


FIG. 3. Left posterior oblique delayed cortical image. There are no focal defects to suggest the presence of pyelonephritis.

the linear appearance is unusual for pyelonephritis, which most commonly presents as a wedge-shaped or rounded defect (1, 2).

Observation of the spinal contour indicates scoliosis. A review of the patient's medical record revealed previous surgery with placement of Harrington fixation rods for a pro-

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gressively developing scoliosis. The linear defect is due to photon attenuation by the metallic Harrington rods.

This case illustrates the importance of carefully reviewing the medical record when confronted with an unusual and unexplained finding on a nuclear medicine study.

INTERPRETATION

No focal cortical defects were present to suggest the presence of pyelonephritis.

NOTE

* LEM, Siemens Gammasonics, Schaumburg, IL.

REFERENCES

1. Conway JJ. The role of scintigraphy in urinary tract infection. *Semin Nucl Med* 1988;18:308.
2. Traisman ES, Conway JJ, Traisman HS, et al. The localization of urinary tract infection with ^{99m}Tc-glucoheptonate scintigraphy. *Pediatr Radiol* 1986;16:403.