

## PROSTATE ADENOCARCINOMA PRESENTING WITH INGUINAL LYMPHADENOPATHY

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### ABSTRACT

The lymphatic spread of prostate adenocarcinoma most often involves the iliac, obturator, and hypogastric nodes. Inguinal lymphadenopathy is very rare during the early stages of this disease, especially in the absence of pelvic lymphadenopathy or other metastases. We present a case of prostate adenocarcinoma with inguinal node involvement during the initial presentation, emphasizing the importance of a complete physical examination and the consideration of other concurrent diseases. *UROLOGY* 61: 463xxi–463xxii, 2003. © 2003, Elsevier Science Inc.

A 77-year-old man without significant past medical or surgical history presented with an elevated prostate-specific antigen (PSA) level of 7.8 ng/mL on routine screening. At repeated testing 1 year later, his PSA level had increased to 17.0 ng/mL. The patient remained asymptomatic without complaints. On physical examination, the patient had a painless, firm, right inguinal lymph node measuring 3 cm in diameter. Digital rectal examination revealed an induration in the left lobe of the prostate. The physical examination was otherwise unremarkable, including examination of the scrotum, penis, anus, and skin.

Transrectal biopsy of the prostate demonstrated adenocarcinoma (Gleason score 4 + 4 = 8). Biopsy of the right inguinal lymph node also revealed a poorly differentiated adenocarcinoma with immunohistochemical staining that was strongly positive for PSA (Fig. 1), consistent with metastatic prostate carcinoma. Computed tomography of the abdomen and pelvis was remarkable for an enlarged prostate and a 3-cm right inguinal lymph node (Fig. 2). No pelvic lymphadenopathy or evidence of metastasis was observed. The bone scan did not show any metastasis. A ProstaScint scan was not done.

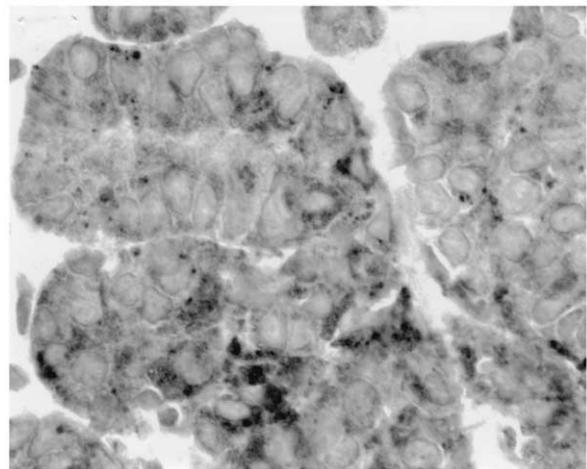


FIGURE 1. Biopsy of the right inguinal lymph node showing a poorly differentiated adenocarcinoma with an immunohistochemical staining that is strongly positive for PSA.

The patient was treated with androgen blockade before radiotherapy. His PSA level decreased to 5.1 ng/mL, and the inguinal node became barely palpable. The patient subsequently underwent locoregional radiotherapy. Hormonal treatment continued for a total duration of 4 months. At the most recent follow-up, 14 months later, digital rectal examination, computed tomography, and bone scanning showed no evidence of disease. The patient was asymptomatic with a PSA level of 0.9 ng/mL.

### COMMENT

Lymphatic drainage of the prostate and seminal vesicles is predictable, with the major route flow-

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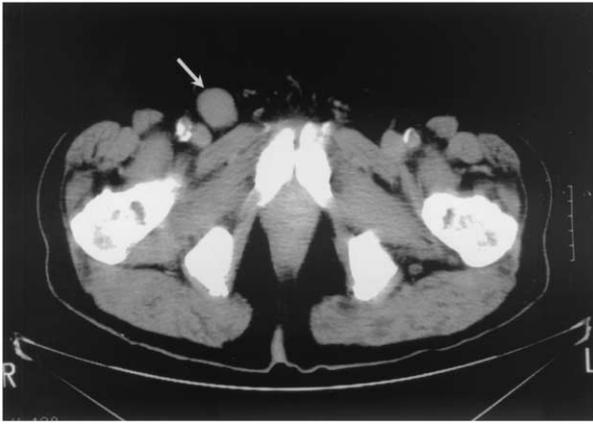


FIGURE 2. Computed tomography scan of pelvis showing a 3-cm enlargement of the right inguinal lymph node (arrow).

ing into the obturator and internal iliac nodes. Secondary lymphatic drainage flows from the base of the prostate into the external iliac and sacral lymph nodes. These are the nodes most often evaluated during the initial workup. The inguinal lymph nodes are not included as the first-echelon lymph nodes. Although many cases have been reported of prostate adenocarcinoma metastasizing to inguinal nodes many years after diagnosis, only 1 case has been reported in which inguinal lymphadenopathy was the presenting sign.<sup>1</sup> Our current case illustrates a patient with clinically organ-confined T2a prostate cancer. Using the updated Partin nomogram, the patient had a 17% risk of pelvic node involvement, and the risk of inguinal node involvement was extremely low.<sup>2</sup> He had not undergone any previous local surgery that might have distorted the lymphatic drainage of the prostate. One possible explanation is that he might have had some aberrant lymphatic drainage of the prostate, especially considering the absence of hematogenous spread. Uncommon routes of pelvic lymphatic drainage that have been reported include the gonadal vessels, mesenteric and mesocolic

nodes, posterior iliac crest nodes, and inferior phrenic nodes.<sup>3</sup> Periprostatic and periseminal vesicle lymph nodes, although uncommon, have been reported to be involved by metastatic prostate cancer.<sup>4</sup>

This case emphasizes the importance of a complete physical examination during patient assessment. In addition to the digital rectal examination, the clinician should also palpate the inguinal region carefully. Although the possibility of inguinal metastasis in the early stages of prostate cancer is rare, its presence will have important implications for treatment and management, such as the use of hormonal therapy with or without locoregional radiotherapy. Many believed that this patient had metastatic disease and that locoregional radiotherapy would not benefit him. Extrapolating from the data on Stage D1 disease (pelvic node positivity), there might be some advantages to combining hormonal and radiotherapy.<sup>5</sup> The clinician should also consider possible concurrent illnesses that can cause inguinal lymphadenopathy such as infections, inflammatory conditions, lymphoma, melanoma, and carcinoma, as well as metastatic disease from anal, penile, urethral, and skin cancers.

#### REFERENCES

1. Slavis SA, Golji H, and Miller JB: Carcinoma of the prostate presenting as inguinal adenopathy. *Cleve Clin J Med* 57: 97, 1990.
2. Partin AW, Kazan MW, Subang EN, *et al*: Combination of prostate-specific antigen, clinical stage, and Gleason score to predict pathological stage of localized prostate cancer: a multi-institutional update. *JAMA* 277: 1445–1451, 1997.
3. Park JM, Charnsangavej C, Yoshimitsu K, *et al*: Pathways of nodal metastasis from pelvic tumors: CT demonstration. *Radiographics* 14: 1309–1321, 1994.
4. Kothari PS, Scardino PT, Ohori M, *et al*: Incidence, location, and significance of periprostatic and periseminal vesicle lymph nodes in prostate cancer. *Am J Surg Pathol* 25: 1429–1432, 2001.
5. Lawton CA, Winter K, Byhardt R, *et al*: Androgen suppression plus radiation versus radiation alone for patients with D1(pN+) adenocarcinoma of the prostate. *Radiat Oncol Biol Phys* 38: 931–939, 1997.