A Case of Prostate Cancer in 34 year old man Presenting with Generalized Lymphadenopathy mimicking Malignant Lymphoma

We report a case of prostate cancer in 34 year old man presenting with generalized lymphadenopathy mimicking malignant lymphoma without any urinary symptoms. Lymph node biopsy revealed metastatic adenocarcinoma and immunohistochemical stain was strongly positive to prostate specific antigen (PSA). Serum PSA level was also markedly elevated. Transrectal ultrasonogram showed mild enlargement in right lobe of prostate. Needle biopsy finding of prostate also was consistent with adenocarcinoma. Bone scan revealed multiple metastatic lesions including vertebrae, ribs, pelvis, and both femurs. Generalized lymphadenopathy and elevated PSA level was decreased after bilateral orchiectomy. *(JKMS 1997; 12: 262~5)*

Key Words : *Prostate cancer, Young age, Generalized lymphadenopathy*

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INTRODUCTION

Prostate cancer is predominantly a disease of older man. Males younger than 50 years of age account for approximately 1% of all patients diagnosed with prostate cancer, limiting the study of the natural history and prognosis of this disease in younger men. The wide spread use of more efficient diagnostic tests, including measurement of prostate specific antigen (PSA) levels and transrectal ultrasonography (TRUS), increases the number of cases detected (1). Although lymphatic and lymph node metastases are common in prostate cancer, most of the patients are presented with urinary symptoms such as urinary frequency, hesitation, or voiding difficulty. We report here a case of prostate cancer in a 34 year old man presenting with generalized lymphadenopathy mimicking malignant lymphoma without any urinary symptoms, finally diagnosed as prostate cancer.

CASE REPORT

A 34 year old man who has been suffering from low abdominal discomfort and palpable neck mass for 2 months was referred to Hanyang University KURI Hospital for further evaluation. The patient had weight loss (6 kg during 2 months), mild febrile sense, and intermittent sweating, but he denied any urinary symptoms. Physical examination showed multiple lymphadenopathy including bilateral supraclavicular and both inguinal lymph nodes. A large ill-defined mass was also palpated in the right lower abdomen. Digital rectal examination revealed firm and mild enlargement of prostate without any nodularity. Laboratory findings were as follows: WBC 6,020/mm^3, Hg 12.5 g/dl, Hct 35.1%, platelet 349,000/mm^3, normal urine analysis, SGOT 22 U/L, SGPT 15 U/L, serum alkaline phosphatase 106 IU/L and LDH 172 U/L.

Chest X-ray showed bilateral enlargement of mediastinal lymph nodes and chest CT scan revealed multiple lymphadenopathy in right paratracheal, pretracheal, subcarinal, and both supraclavicular areas. Extensive multiple conglomerated lymphadenopathy was noted along the celiac, paraaortic, common iliac, both external and internal iliac and obturator area in abdomino-pelvic CT scan suggesting malignant lymphoma (Fig. 1A). Bilateral hydronephrosis due to periureteral lymphadenopathy and bladder wall thickening was also detected, but the size of the prostate was normal (Fig. 2).

Needle biopsy of right supraclavicular lymph node and right lower abdominal mass showed metastatic adenocarcinoma composed of small uniform cells having a moderate amount of cytoplasm, arranged in cords or forming abortive small glands (Fig. 3A).

Despite extensive clinical searching, the primary focus of metastatic adenocarcinoma was not detected, therefore he was initially diagnosed as metastatic adenocarcinoma of unknown origin. However, an immunohistochemical stain of the specimen for PSA was strongly positive (Fig. 3B) and he underwent transrectal ultrasonography to detect the presence of prostate cancer revealing that the right lobe of prostate was slightly enlarged and nodular

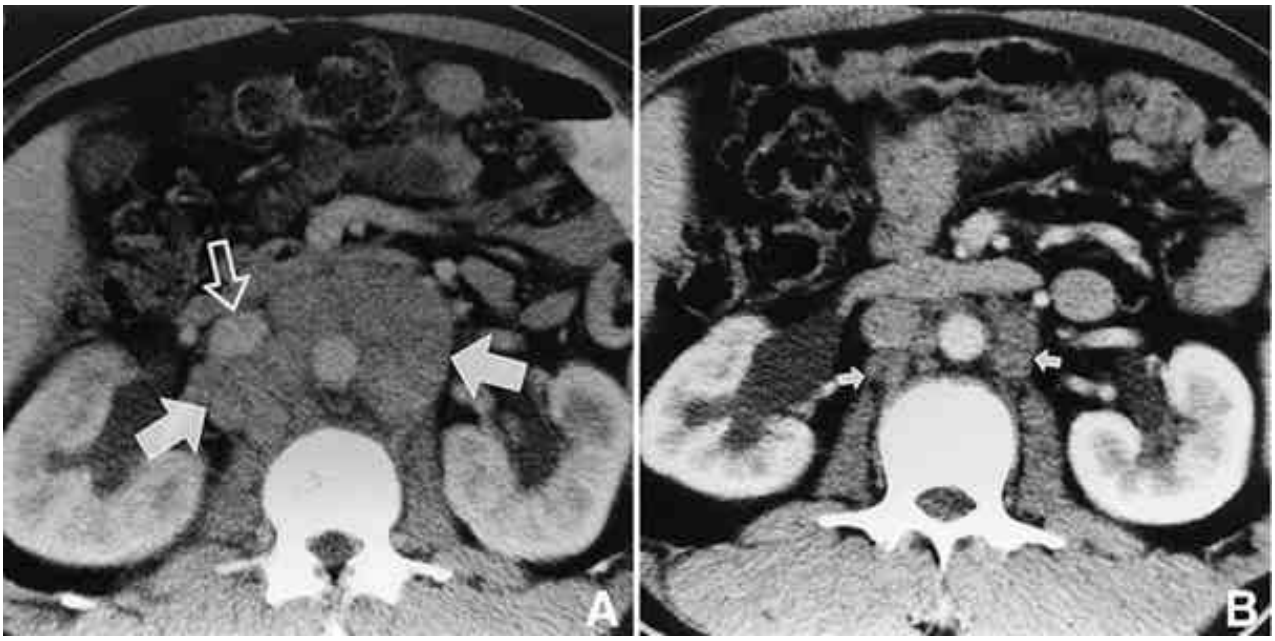

Fig. 1. A : Enhanced abdominal CT scan reveals multiple paraaortic lymph nodes (arrows) and anterior displaced inferior vena cava (open arrow). **B :** Follow-up CT scan after bilateral orchiectomy shows marked decrease in size and number of lymph nodes (arrows).

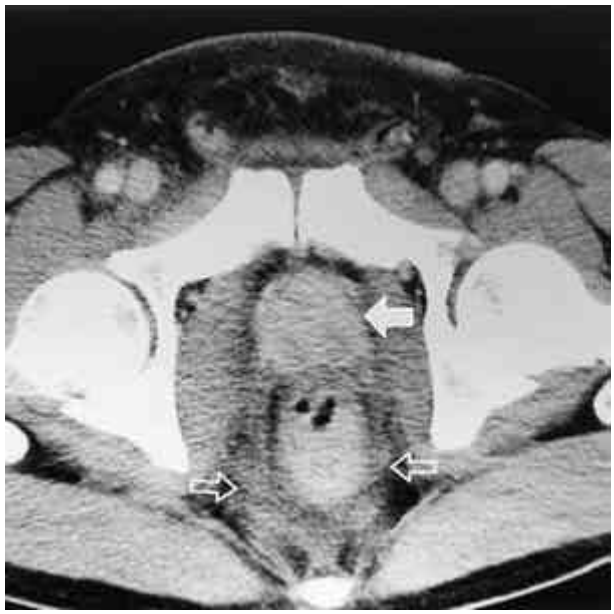

Fig. 2. At the level of prostate, enhanced CT scan shows normal size of prostate (arrow) and diffuse perirectal infiltration (open arrows).

shaped. Then the gun-shot biopsy finding of the prostate nodule was the same histology of Gleason grade 4 adenocarcinoma as found in the inguinal mass. Serum PSA level was also markedly elevated to 759 ng/ml (normal range : 0~2.5 ng/ml).

Bone scan revealed multiple hot uptake on the vertebrae, ribs, pelvic bone, and both femurs. Finally he was diagnosed as having metastatic prostate cancer (stage D). The patient underwent a bilateral orchiectomy. Two months after the operation, the serum PSA level was decreased to 6.89 ng/ml and the generalized lymphadenopathy was also markedly decreased in follow-up abdominal-pelvic CT scan (Fig. 1B).

DISCUSSION

Adenocarcinoma of the prostate occurs rarely in men younger than 50 years. This results in difficulty in studying the malignant behavior of this disease in the younger men (2). Existing reports provide conflicting views regarding this matter (3~5). Tjaden et al. (6) reported their experience with 56 patients younger than 50 years of age and observed a very poor clinical outcome. Johnson et al. (7) observed the same biologic aggressiveness of prostate cancer in 26 patients younger than 50 years. Others, however, have not observed the same findings. Byar et al. (8) reviewed 51 cases and suggested that younger men may have a better prognosis. Silber et al. (9) also reported favorable survival rates in men younger than 50 years.

Most common clinical presentations are prostatism, bone pain, and urinary retention in prostate cancer regardless of patients' age (10~12). But this patient did

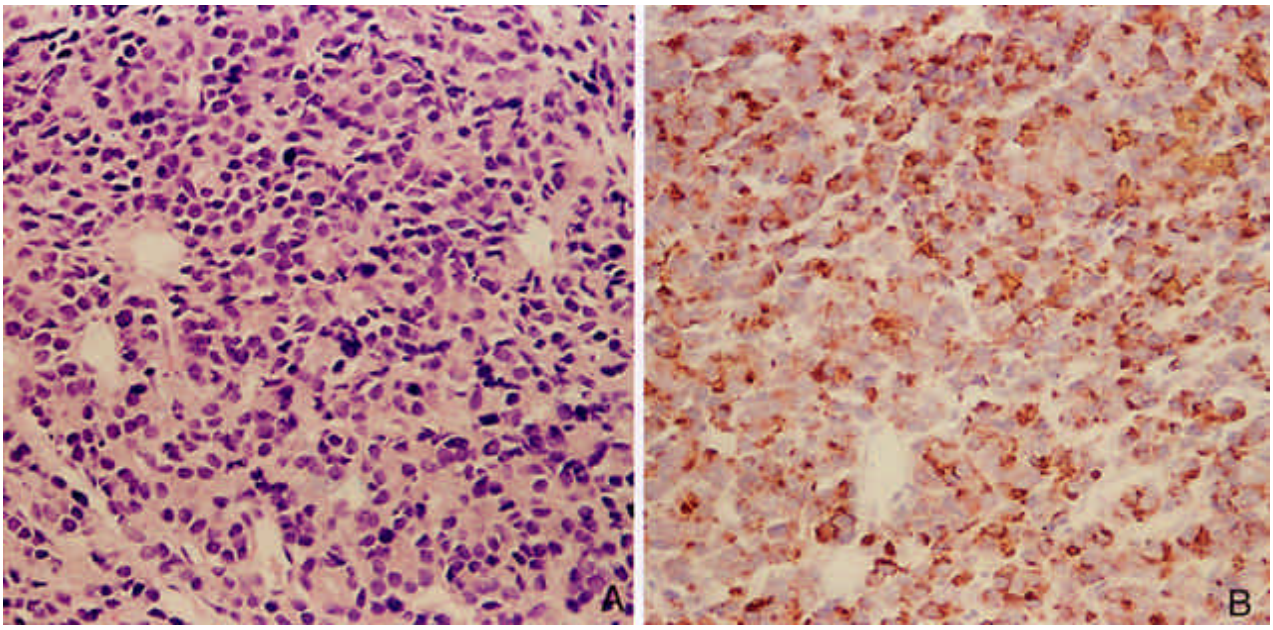

Fig. 3. A : Metastatic adenocarcinoma composed of small uniform cells having moderate amount of eosinophilic cytoplasm arranged in cords or small abortive glands. **B :** Immunohistochemical stain for PSA shows strong positivity in the cytoplasm of the tumor cells.

not have any urinary symptoms until he has been found to have the terminal stage of the disease.

It has been known that lymph node metastasis in prostate cancer is common and usually spreads along the pelvic lymphatic channel. But the prostate cancer presenting with generalized lymphadenopathy including supraclavicular, mediastinal, celiac, paraaortic, and inguinal lymph nodes as in our case has been rarely reported.

Before adenocarcinoma of unknown origin was diagnosed, metastatic prostate carcinoma should be suspected with adenocarcinoma in all men especially those of an older age. But even younger patients with metastatic adenocarcinoma of unknown origin should be searched the presence of occult prostate cancer as in our case. In this setting, elevated levels of serum PSA or tumor staining with PSA provides confirmatory evidence of prostate cancer (13).

The treatment of prostate cancer in younger men is still controversial. Maier et al. (14) treated younger patients in two groups one with androgen deprivation, another with androgen deprivation and systemic chemotherapy. In the group with androgen deprivation, the mean time to progression was 11.3 months, the mean survival time being 21.4 months. In the group with androgen deprivation plus systemic chemotherapy including cisplatin and adriamycin, progression was noted after 26.7 months with a mean survival time of 26.2 months suggesting that combination therapy should be considered as the usual treatment strategy in younger patients with primary metastatic prostate cancer. But others reported that patients were heterogeneous with respect to treatment, it may be difficult to conclude the treatment strategy in this group (4, 7, 15). Although in this patient he underwent bilateral orchiectomy only and achieved marked response, further follow-up should be warranted.

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