Cervical lymph node metastasis as the first and only manifestation of prostatic adenocarcinoma

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Abstract Prostatic carcinoma initially manifesting as only cervical lymph node swelling is a rare phenomenon. A 74-year-old man presented left cervical lymphadenopathy. An excisional biopsy was performed, and it was pathologically diagnosed as metastatic thyroid follicular carcinoma. However, imaging technique revealed no thyroid tumor or tumor in the body. The lymph node was re-examined 23 months after the first diagnosis: it showed adenocarcinoma positive for PSA and PSAH. Biopsy of the prostate was performed immediately, and it showed Gleason 8 (4 + 4) prostatic adenocarcinoma. Imaging technique showed two small metastases to pelvic bone. No other metastatic lesions were detected. The patient later developed acute myelogenous leukemia, and died of respiratory failure. The present case shows that prostatic adenocarcinoma can present only cervical lymph node swelling without metastases to other organs.

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1. Introduction

Prostatic carcinoma is one of the most common malignancies in older men. It usually manifests as urinary dysfunction due to prostatic swelling or as elevated serum prostate-specific antigen (PSA). Cervical lymph node swelling as the first manifestation of prostatic carcinoma is relatively rare [1–6]. Here, the author reports a case of prostate adenocarcinoma initially manifesting as a cervical lymph node swelling.

2. Case report

A 74-year-old man consulted to our hospital because of a left cervical lymph node swelling. The physicians suspected malignant lymphoma, and an excisional biopsy was performed. The patient did not complain of urine dysfunction, and the clinician did not suspect prostatic hyperplasia and malignancy. No test of serum PSA was made at that time. A pathological diagnosis of follicular thyroid carcinoma metastatic to a cervical lymph node was made by a pathologist (other than the author). The pathologist was another consulting pathologist. The author did not know this diagnosis by the time when the patient was found to have elevated serum PSA. However, the retrospective survey found that it was misdiagnosis. The scrutiny of thyroid was performed, but did not find any tumors. Imaging modalities including US, X-P, CT, and MRI revealed no tumors or lesions in the body. Clinically, follicular thyroid carcinoma at Stage 3 was suspected, but the patient did not receive total thyroidectomy and lymph node dissection. The patient was followed up as an occult thyroid carcinoma, and 23 months later the patient was found to have elevated PSA (1500 ng/ml). The re-examination of the cervical lymph node biopsy was performed by the author, together with immunohistochemistry involving Dako-
Envision methods as previously reported [7–10]. It revealed an adenocarcinoma (Fig. 1) positive for PSA (Fig. 2) and prostatic acid-phosphatase (PSAP), and negative for thyroglobulin and TTF-1. Thus, thyroid carcinoma was excluded. The tumor cells were free from characteristic features of papillary thyroid carcinoma such as ground-glass nuclei, nuclear inclusions, and nuclear groove. A diagnosis of metastatic prostatic adenocarcinoma to a cervical lymph node was made by the author. Prostatic biopsy was performed immediately, and it showed invasive moderately differentiated adenocarcinoma of Gleason score 8 (4 + 4) (Fig. 3). The imaging techniques showed two small metastases of the pelvic bone. The patient was treated by chemotherapy and hormone therapy. However, the patient developed acute myelogenous leukemia 3 months after the prostatic biopsy. The patient was treated by chemotherapy and radiation, but died of bronchopneumonia 4 months after the diagnosis of acute leukemia. Autopsy was not performed.

3. Discussion

Cervical lymph node metastasis of prostatic carcinoma is relatively rare phenomenon [1]. However, prostatic carcinoma initially manifesting as a cervical lymph node metastasis is very rare [2–5]. Cho and Epstein [1] examined 26 cases of metastatic prostatic carcinoma of supra-diaphragmatic lymph nodes. Jones and Anthony [2] reported 11 cases of metastatic prostatic carcinoma presenting as cervical lymphadenopathy. In addition, there were only a few case reports that have demonstrated cervical lymph node involvement of prostatic carcinoma [3–6]. Some of them are prostatic carcinomas with the initial presentation of cervical lymph node metastases, but such cases are extremely rare.

The histological diagnosis is easy. The demonstration of PSA and PSAP is relatively specific for prostatic carcinoma, though they are infrequently positive in some carcinomas such as salivary duct carcinoma. In the present study, the only metastatic site was the cervical lymph node in the initial stage. The bone metastasis was a late event in the present study. The blood PSA level was very useful in the present study.

In summary, the author reported a very rare case of prostatic carcinoma initially presenting as only cervical lymph node swelling.

Conflict of interest

The author has no conflict of interest.

References

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