Online Case Report

Metastatic prostate carcinoma presenting as supraclavicular lymphadenopathy – is it unusual?

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Prostate carcinoma presenting initially as supraclavicular lymphadenopathy has been increasingly reported as an uncommon presentation of the disease. The diagnosis is often made on lymph node biopsy as these patients rarely undergo digital rectal examination or serum prostate-specific antigen level measurement as part of their initial investigations. A 74-year-old man presented with supraclavicular lymphadenopathy and subsequently deteriorated with severe shortness of breath associated with venous congestion of the head and neck. The diagnosis of metastatic prostate adenocarcinoma was made only after cervical lymph node biopsy. Following the diagnosis, he was confirmed as having an abnormal prostate on digital rectal examination and a raised serum prostate-specific antigen level. The authors propose that a digital rectal examination and a serum prostate specific antigen level be included in the initial investigation process of male patients with persistent supraclavicular lymphadenopathy. This would prevent delay in diagnosis, allow early intervention and decrease patient morbidity.

Keywords: Prostate carcinoma – Supraclavicular lymphadenopathy – Prostate-specific antigen

Case report

A 74-year-old man, previously fit and well, was referred by his general practitioner to a surgical out-patient clinic with persistent supraclavicular lymphadenopathy. He gave a 6-week history of malaise and non-productive cough which progressed to a sore throat and pain on the right side of his neck. Physical examination revealed lymph nodes in bilateral supraclavicular fossae and the right jugulo-digastric region with no lymphadenopathy in the axillae or groin. Examination of his chest and abdomen were unremarkable. A digital rectal examination was not performed at the time.

Ten days later, he was admitted to an emergency medical ward with facial swelling, worsening dry cough, sore throat and significant pharyngeal congestion consistent with

venous congestion to the head and neck. His chest X-ray was normal. An ultrasound scan of his neck and abdomen showed multiple, large lymph nodes of abnormal architecture in bilateral supraclavicular fossae, the largest node measuring 2 cm, with right para-aortic lymphadenopathy and bilateral iliac lymphadenopathy. The diagnosis of a lymphoma was strongly suspected.

Six days following admission, he deteriorated further with severe shortness of breath, increased swelling and pain in his neck and distended veins on his upper chest wall. A computerised tomography scan of the neck, thorax, abdomen and pelvis showed bilateral jugular vein thrombosis, paratracheal and anterior mediastinal lymphadenopathy with a normal para-aortic region. The superior vena cava was not compressed or occluded; however, extensive venous collaterals were reported on

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the left chest wall and axilla. Doppler ultrasound scan of his neck confirmed occlusive thrombi in the right and left jugular veins. He was commenced on dexamethasone to reduce any inflammatory component of the lymphadenopathy and warfarin in view of his deep vein thrombosis.

In the absence of a diagnosis, a cervical lymph node biopsy was performed. This showed a lymph node extensively replaced by metastatic adenocarcinoma staining positive for prostate-specific antigen (PSA) and prostate-specific acid phosphatase, diagnostic of a metastatic adenocarcinoma of the prostate. He then had a digital rectal examination which confirmed a hard, irregular prostate, his serum prostate-specific antigen level was raised at 586.0 ng/ml and a bone scan suggested metastatic disease.

He was started on cyproterone acetate, 100 mg, three times a day and leuporelin acetate injections, 3.75 mg, monthly. Seven months later, the patient had significant symptomatic relief with a marked reduction in supraclavicular lymphadenopathy and a decreased prostate-specific antigen level of 251.1 ng/ml.

Discussion

Metastatic prostate carcinoma presenting as supraclavicular lymphadenopathy is not as uncommon as one would expect. Butler *et al.*¹ described 19 patients with prostate carcinoma presenting initially with supraclavicular lymphadenopathy, the diagnosis was confirmed by prostate biopsy in 14 patients. They noted that only 42% had an abnormal digital rectal examination.¹ Woo *et al.*² described a 76-year-old patient presenting with supraclavicular lymphadenopathy. They recorded a normal prostate on digital rectal examination. A PSA performed several days after admission was raised at 326 ng/ml and a fine needle biopsy of the neck mass confirmed a prostate adenocarcinoma.² Cho *et al.*³ reported 26 cases of metastatic prostate carcinoma in supradiaphragmatic lymph nodes, in which only 7 cases had a history of prostate carcinoma; they noted that 58% had abnormal rectal examinations. Saeter *et al.*⁴ reported that, in 35 patients with non-regional lymphatic spread from prostate carcinoma, the left supraclavicular fossa

was the most common site of spread in 69% of cases and 75% of cases had abnormal digital rectal examination.

In this case report, there was a delay of 20 days between being seen by a general surgeon who identified the supraclavicular lymphadenopathy and a diagnosis of metastatic prostate carcinoma. In this time, the patient deteriorated significantly with severe shortness of breath and venous congestion to his head and neck. Furthermore, he did not have a digital rectal examination or a serum prostate-specific antigen level check at the time of initial presentation. Similar case reports have confirmed that this is not an unusual progression of events in the investigation of persistent supraclavicular lymphadenopathy.¹⁻⁵

Following commencement of the anti-androgens, cyproterone acetate and leuporelin acetate, the patient experienced a dramatic improvement in symptoms and a significant drop in prostate-specific antigen level from 586.0 ng/ml to 251.5 ng/ml within 7 months of treatment.

Conclusions

The authors emphasise that a digital rectal examination and a serum prostate-specific antigen assay are relatively easy and non-invasive procedures to perform. We recommend that all male patients with persistent supraclavicular lymphadenopathy have a digital rectal examination and serum prostate-specific antigen level estimate at the time of initial presentation.

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