

Case Report

Unusual Case of Laryngeal Squamous Cell Carcinoma with Cervical Metastasis of a Prostatic Adenocarcinoma: A Case Report

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Keywords

Prostatic adenocarcinoma · Cervical metastasis · Lymph nodes

Abstract

Brain and Head and neck metastases are rare in prostatic carcinoma patients. In this report we present a very uncommon case of the concomitant occurrence of a prostatic adenocarcinoma with neck metastases and an advanced laryngeal squamous cell carcinoma without neck metastases. The presence of cervical lymph node prostate adenocarcinoma metastasis concomitantly with a laryngeal squamous cell carcinoma is at least intriguing and may remind us of a rare event called “collision tumors”. In this case we had the metastatization of 1 carcinoma to the site of the drainage of another carcinoma, but we never found the 2 histological types as close as requested to reach the definition of a collision tumor. This emphasizes the need of histological verification of different sites of recurrence when 2 or more primary cancers are known in a patient, particularly when the treatments of those primary cancers vary widely.

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Introduction

Prostate cancer is a very common and frequent cancer in males in Western countries [1]. Caucasian and Caribbean men have a higher incidence of prostate cancer than men in Asia [2]. Prostate cancer remains the second leading cause of cancer death in men after lung cancer. It is generally a slow-growing cancer. The incidence of latent prostate cancer observed at autopsy and the incidence and prevalence of clinically manifest prostate cancer increase substantially with age [3]. Metastatic dissemination occurs at a later stage during the course of the disease. The most common sites of metastasis are the bones and regional lymph nodes, followed by the liver, lungs, brain, and digestive system [4]. Lymphatic dissemination occurs most often in regional lymph nodes such as the obturator, internal, and external iliac lymph nodes, followed by presacral and para-aortic lymph nodes [5]. Brain and head and neck metastases are rare in prostatic carcinoma patients. Usually, neck lymphadenopathies are encountered in head and neck mucosal or skin squamous cell carcinomas or melanoma as well as in malignant lymphomas. Neck metastases of a primary located below the clavicles level are quite rare. Regional neck metastasis can be observed in bronchial and esophageal carcinoma. Systemic neck metastases have been described in the lungs, stomach, kidneys, and testicles. To the authors' knowledge, only few cases of neck metastases from prostatic adenocarcinoma have been reported [6–10]. In this article we report a very uncommon case of the concomitant occurrence of a prostatic adenocarcinoma with neck metastases (cT3 G2 cN0 cM1) and an advanced laryngeal squamous cell carcinoma without neck metastases (pT4a G2 pN0 cMx R0).

Case Presentation

In August 2011, a 67-year-old Swiss man was admitted to the Head and Neck Surgery Department due to dysphonia and airway aspiration, with recent progressive dyspnea. The patient was also known for a metastatic prostate cancer (cT3 G2 cN0 cM1) since 2004, which had been treated with hormonotherapy and orchidectomy. Physical examination (panendoscopy) showed a very large obstructive tumor infiltrating and fixing the 3 levels of the right larynx. No cervical adenopathy was found clinically. On the diagnostic CT scan, a 5-cm mass of the right vocal cord with osteolysis of the thyroid and arytenoid cartilage and invasion of the surrounding muscles was noted. No suspect adenopathies were described. The patient underwent a diagnostic panendoscopy with laser deobstruction of the upper airways. The biopsy revealed a moderately to poorly differentiated squamous cell carcinoma.

After a multidisciplinary discussion, the patient was treated by a total laryngectomy and bilateral suprascapular neck dissection. The histological analysis showed a moderately differentiated squamous cell carcinoma of the larynx, infiltrating the right cricoid and thyroid cartilages and extralaryngeal soft tissues. Of the 71 lymph nodes examined, 19 were metastatic but due to an adenocarcinoma compatible with the prostate cancer. The involved lymph nodes were all on the left side, while a focal lymphangiosis from an adenocarcinoma was found in the soft tissue of the right side specimen. The laryngeal tumor was then classified as pT4a pN0 (0/71) cMx R0.

Due to the nature of lymph node metastases (adenocarcinoma) with laryngeal R0 resection in the setting of a patient who presented postoperative complications (respiratory insufficiency, non-ST-segment elevation myocardial infarction [NSTEMI], and peritracheosto-

ma necrosis), it was decided not to add immediate adjuvant radiotherapy, but to initiate hormonotherapy with bicalutamide and zoledronic acid.

Three months later, the patient presented a rapidly growing left cervical nodule. The CT scan revealed an enlarged lymph node of 4 × 5 cm, with central necrosis. The ultrasound-guided fine needle aspiration showed malignant cells of a squamous cell carcinoma. A surgical approach was rejected because of the poor general condition of the patient, and radiochemotherapy (Cetuximab) was proposed. The left cervical metastatic lymph node was treated with 70 Gy and the ipsilateral cervical region (levels II–V) with 50 Gy. The treatment was well tolerated. After an initial partial remission, the tumor progressed and the patient developed distant pulmonary metastases. A further line of chemotherapy (cisplatin, 5-FU, and cetuximab) was administered and the patient died 1 year after the completion of the combined chemoradiotherapy from regional and distant cancer progression.

Discussion

Bone represents the main site of distant metastasis in prostate cancer. Superficial lymph node metastases are a rare occurrence in prostate cancer [11], particularly metastases to the supraclavicular lymph nodes which are seen in about 0.33% of patients with prostate carcinoma [12], and accounts for about 13.4% of all atypical metastatic sites [13]. Supradiaphragmatic spread of prostate cancer has been postulated to occur hematogeneously via the vertebral venous system, or Batson plexus, accessible via direct extension from the primary cancer site [14].

In the present case, the chronological events are quite peculiar. The presence of cervical lymph node prostate adenocarcinoma metastasis concomitantly with a laryngeal squamous cell carcinoma is at least intriguing. Whether the development of the laryngeal cancer influenced the dissemination of the prostatic cancer cell in the cervical lymph nodes remains questionable. It is more likely that the cervical lymph node metastases were present before the laryngeal cancer and their diagnostic was purely incidental. Also the lymph node recurrence after surgery was different from the initial diagnostic since it was the squamous cell carcinoma that recurred and not the prostatic cancer. Whether the addition of postoperative radiotherapy would have prevented such a recurrence remains uncertain in the light of the rapid progression observed. However, one can emphasize that the presence of an adenocarcinoma in the lymph nodes changed the prostatic cancer prognostic in this patient, hence contributing to the changing of our usual radiotherapy indication. The whole setting was surprising, and may remind us of a rare event called “collision tumors” [15]. Collision tumors have been defined differently by various authors with some minor variations. In the present case we do not strictly reach one of those definitions. One of the oldest definitions of a collision tumor by Meyer [16] is defined as “the meeting and eventual intermingling of two malignant neoplasms arising at independent topographical sites”. More recently, Dodge [17] added that in order to accept a tumor of mixed structure as a collision tumor, the 2 histologies should be clearly separated in the metastases, and furthermore it requires the absence of any transitional pattern between the 2 tumor types. Finally, Spagnolo and Heenan [18] are less restrictive, and allow some transitional pattern, with a zone of intermediate histological appearance. Even if a collision of lymph node metastases of 2 carcinomas from separate sites is very rare [19], in this case we had the metastatization of 1 carcinoma to the site of the drainage of another carcinoma, but we never found the 2 histological types as close as requested to reach the definition of a collision tumor.

Conclusion

While the occurrence of such a clinical behavior remains rare, the chronology and the sublocation of the recurrences in the present case emphasizes the need of histological verification of different sites of recurrence when 2 or more primary cancers are known in a patient, particularly when the treatments of those primary cancers vary widely.

Statement of Ethics

The authors report no ethical conflicts.

Disclosure Statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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