Case Report

A Case of Metastatic Squamous Cell Carcinoma of the Hypopharynx Manifesting as Acute Abdomen

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Abstract

Introduction: Squamous cell head and neck cancers are usually confined to local and regional sites but occasionally, patients may present with rare manifestations of distant metastases. Clinical Picture: A 23-year-old female was treated with concurrent chemo-radiotherapy for stage IVA post-cricoid squamous cell carcinoma. A month later, she presented with acute abdomen and was found to have extensive peritoneal nodules at laparotomy. Intestinal obstruction soon followed. Treatment: She was managed conservatively for the intestinal obstruction and given weekly paclitaxel. Outcome: She continued to deteriorate and succumbed shortly after the diagnosis of carcinomatosis peritoneii. Conclusion: This rare and aggressive presentation reminds us to be cognizant of relapsed head and neck cancers manifesting atypically, and the need for more aggressive search of distant disease in at least some subgroups of head and neck cancer.

Ann Acad Med Singapore 2004;33:356-8

Key words: Carcinomatosis peritoneii, Cisplatin, Concurrent chemo-radiotherapy, Head and neck cancer, Paclitaxel

Case Report

T, a 23-year-old female, was previously well until November 2000 when she presented with 1-year history of sore throat associated with neck lumps for 2 months. Clinically, she had left cervical lymphadenopathy measuring 3 cm. Computed tomographic (CT) scan of the neck showed a mass arising from around the left pyriform sinus, involving the left aryepiglottic fold, lateral wall of the left pyriform sinus, left wall of the post-cricoid pharynx and posterior pharynx with multiple left deep cervical lymphadenopathy. Biopsy of the lesion in the post-cricoid region confirmed squamous cell carcinoma (Fig. 1). She was staged as T2N2b (stage IVA) hypopharyngeal squamous cell carcinoma. The treatment plan was combined chemotherapy with radiotherapy for larynx preservation followed by radical neck dissection for residual nodal disease.

From December 2000 to February 2001, T underwent concurrent chemo-radiotherapy with daily cisplatin at 6mg/m^2 as a radiosensitizer. She received 6600 cGy to the primary tumour, 6000 cGy to the neck with 1000 cGy as neck boost. However, the chemotherapy was interrupted due to radiation-induced odynophagia and grade 3/4 chemotherapy-induced emesis resulting in giddiness secondary to postural hypotension.

A total of 24 doses of cisplatin (8 mg per day) were given during the 37 fractions of radiotherapy. Nevertheless, the patient responded very well with complete clinical resolution of the cervical lymphadenopathy by the third week of treatment.

About 1 month later, on 23 March 2001, T was admitted for acute right iliac fossa pain associated with vomiting. Clinically, there were signs suggestive of acute abdomen

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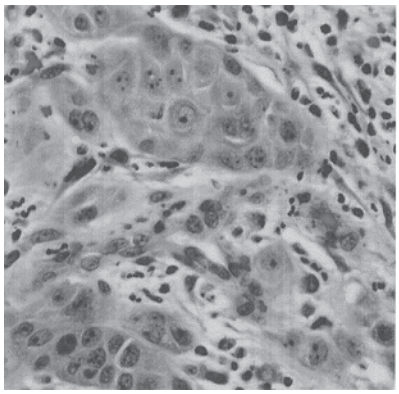

Fig. 1. Photomicrograph of biopsy from the primary tumour.

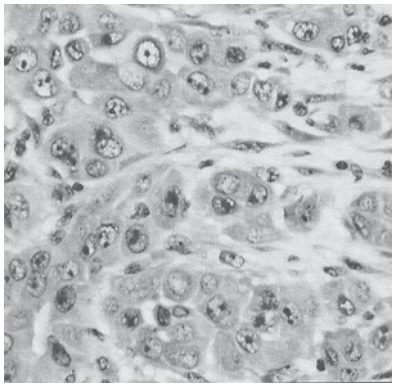

Fig. 2. Photomicrograph of a peritoneal nodule.

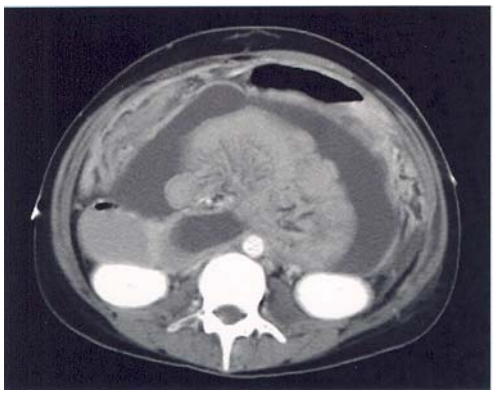

Fig. 3. CT scan of the abdomen (12 April 2001) showing extensive peritoneal carcinomatosis with intestinal obstruction due to serosal metastases and gross ascites.

and an emergency laparotomy was performed for suspected acute appendicitis.

Intraoperatively, the appendix was found to be normal but there were multiple adhesions between the omentum and the parietal peritoneal wall. Many haemorrhagic areas with numerous pearly transparent nodules in the peritoneum were seen. These nodules were biopsied and found to be deposits of squamous cell carcinoma histologically identical to the primary hypopharyngeal carcinoma (Fig. 2).

Two weeks after laparotomy, on 11 April 2001, T developed intestinal obstruction. CT scan of the abdomen (Fig. 3) showed extensive peritoneal carcinomatosis with intestinal obstruction due to serosal metastases and gross ascites. She was initially managed with intravenous drip and suction via nasogastric tube. Unfortunately, the intestinal obstruction did not resolve with conservative management and she subsequently required total parenteral nutrition. She was offered palliative debulking surgery but she declined. She decided to return to Malaysia where she was given weekly paclitaxel but she eventually died a month later.

Discussion

Head and neck cancers represent a wide spectrum of entities with varying biological behaviour, clinical presentations and prognosis. Most of them tend to spread locoregionally with the exception of cancers of the nasopharynx and hypopharynx where distant metastases tend to occur more frequently.

Almost all hypopharyngeal cancers are squamous cell carcinomas. These are generally aggressive tumours manifesting as locally advanced disease with early cervical nodal metastases due to abundance of regional lymphatic drainage. More often than not, these patients are nutritionally and immunologically compromised which complicates their treatment and partly accounts for their poor prognosis.

In one of the largest series of head and neck cancers reported, Spector et al[1] identified 2550 patients with squamous cell carcinomas of the larynx and hypopharynx treated in a single centre over 2 decades (1971 to 1991). There were 1667 patients with carcinoma of the larynx and 853 hypopharynx (315 aryepiglottic fold, 408 pyriform sinus and 130 posterior hypopharyngeal wall). He reported 16.3% distant metastases amongst those with hypopharyngeal cancers – more than twice as high as that for laryngeal cancers (7.3%). Autopsy findings of distant metastases in tumours of the hypopharynx have been reported to range from as high as 36% to 57%,[2] with the most common distant metastatic sites being the lung, bone, skin and the central nervous system.

Distant and delayed metastases of hypopharyngeal cancers are more common in advanced primary lesions and those with nodal involvement. Both have been shown to be independent prognostic factors in a series of 138 consecutively treated patients with hypopharyngeal squamous cell carcinoma.[3] The results of radiation or surgery alone in this particular group of patients are dismal, with a 5-year survival under 20%.[4,5] Preliminary data from a randomised trial conducted by the European Organisation for Research and Treatment (EORTC) showed that survival of patients who achieved complete response after chemotherapy with radiation was equivalent to surgery with the added advantage of organ preservation in up to a quarter of these patients.[6] Though combined modality treatment is associated with higher treatment-related morbidity, it should be considered in young patients who have locally advanced disease.

To the best of our knowledge, peritoneal metastases in patients with hypopharyngeal cancer have only been reported in 2 patients from Taiwan who were undergoing primary treatment (systemic chemotherapy).[7] Both of them had locally advanced disease (T4N3) but achieved good control of the primary tumour with chemotherapy. The first

patient presented with acute abdomen, whilst the second developed ascites with an abdominal mass. The peritoneal disease was refractory to chemotherapy and both patients died within 1 month. The 3 cases are similar in that the initial response at the primary site was good and then they were found to have peritoneal disease during or shortly after the completion of treatment. All 3 patients eventually had grim outcomes.

In Singapore, there were 404 cases of hypopharyngeal carcinoma diagnosed over the last 3 decades (1968 to 1997) out of which 31 cases were in the region of the post-cricoid pharynx which has a male preponderance (22 males and 9 females).[8] It is less common compared to carcinoma of the larynx (1797 cases over the same period). The overall outcome of patients with hypopharyngeal carcinoma is poor, with less then one fifth of the patients remaining alive at 5 years.[3] For this group of patients with aggressive disease, local treatment may not be adequate. We should consider screening for distant metastasis at diagnosis. Management with multi-modality treatment needs to be explored given the significant risk of distant metastases.

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