

Case Report

A Rare Case of Inguinal Lymph Node Metastasis from Supraglottic Laryngeal Carcinoma

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Abstract

Head and neck cancers are common among men in developing countries. Among head and neck cancers in the United States, supraglottic laryngeal cancer accounts for 12,500 new cases per year. It responds favorably to radiotherapy with or without chemotherapy depending on the stage of disease. Recurrence is local or locoregional. We report a unique case of carcinoma of the larynx with rare distal recurrence in the left inguinal lymph nodes.

Key words: Cancer larynx, metastasis, inguinal lymph node.

Case Report

We report a case of a 63-year-old male who presented to the outpatient department with complaints of hoarseness of voice and throat pain of three months duration. He smoked four to six cigarettes daily for 20 years. There was no history of diabetes or hypertension. There was no family history of any malignancy. Clinical, otorhinolaryngological and cytological examination revealed squamous cell carcinoma of supraglottic larynx (stage T2 N1 M0, T=tumor, N=lymph node, M=metastasis). He was treated with radiotherapy to neck (field: 1 cm above mandible to clavicle, laterally vertical line through mastoid process) with a dose of 68 Grey in 34 fractions over seven weeks with 6 Mega Volt photon. No evidence of disease could be detected clinically or by imaging at the first follow up. Subsequently, the patient was lost to followup.

He presented two years following initial treatment with swellings over the left inguinal region and left side of neck of one month duration. The

swellings were gradually increasing in size.

On general examination, pallor was present. Examination of the left inguinal region revealed a 6 cm by 5 cm nontender swelling, firm to hard in consistency with irregular surface and margin. It was clinically suspected to be matted left inguinal lymph nodes (Figure 1). Level III neck (jugulodigastric) lymph nodes on the left side were palpable, hard, and nontender. There was no evidence of the disease process on otorhinolaryngological examination. Other systems were within normal limits.

All the hematological indices were within normal limits except hemoglobin (8 gm/dL). A thorough work-up (chest rhoentgenogram, computerized tomography of brain, abdominal sonography, colonoscopy, gastrointestinal endoscopy and fibre-optic laryngoscopy) did not suggest any evidence of other metastases. Fine needle aspiration cytology from left inguinal and cervical lymph nodes revealed metastatic poorly differentiated squamous cell carcinoma.

The patient was admitted and cytotoxic chemotherapy with paclitaxel and cisplatin was instituted. Unfortunately, the general condition of the patient deteriorated after completion of two cycles of chemotherapy and, despite the best avail-

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Figure 1. Left inguinal swelling later proved to be a metastasis from the squamous cell carcinoma of the supraglottic larynx.

able treatment, the patient expired.

Discussion

Laryngeal carcinoma is staged according to the extent of the original tumor site and its local spread (T), lymph node involvement (N), and the presence of metastases (M). T1 is the tumor limited to one subsite of supraglottis, such as ventricular bands, arytenoids, suprahyoid epiglottis, infrahyoid epiglottis, aryepiglottic folds, with normal vocal cord mobility. T2 includes the tumors invading mucosa of more than one adjacent aforementioned subsites of supraglottis. T3 includes the tumors limited to larynx with vocal cord fixation and/or to tumors invading either the postcricoid area or the preepiglottic tissues. T4 describes tumors invading the thyroid cartilage, and/or extends into soft tissues of the neck, thyroid, and/or esophagus. N1 means metastasis in a single ipsilateral lymph node, 3 cm or less in its greatest dimension. N2 includes metastasis in a single ipsilateral lymph node, more than 3 cm but less than 6 cm in greatest dimension, or in multiple ipsilateral

lymph nodes, none more than 6 cm in the greatest dimension, or in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension. N3 indicates metastasis in a lymph node more than 6 cm in greatest dimension. M0 indicates no metastases, M1 indicates presence of distant metastasis such as lungs, brain, liver etc.¹

Supraglottic laryngeal carcinomas are common and have a good prognosis.¹ Relapse is uncommon in early stage presentation.^{2,3} Advanced stage cancer do recur predominantly locally or locoregionally. Contiguous spread to cervical lymph nodes, especially level III and IV, can occur. Locally advanced cancers may infiltrate the esophagus posteriorly and thyroid anteriorly.

The reported overall three-year survival rate of supraglottic cancer was 60% and the five-year survival rate was 51.2% with nodal metastases and 64% without.^{4,5} Forty-five percent of the patients with histologically confirmed nodal metastases survived three years. The reported five-year relapse-free survival rate (RFS) is 53% and corrected survival (CS) rate is 83% for T2 tumors versus RFS of 39% and CS of 52% for T4 tumors.⁶ Age more than 60 was associated with a 2.2 times higher risk of dying due to laryngeal cancer.

A retrospective tumor registry analysis of patients with squamous cell carcinoma (SCC) of the larynx and hypopharynx reported that the age, sex, and tumor differentiation did not affect the incidence of distant metastases.⁷ The overall incidence of distant metastases was 8.5% with the following distribution: glottis 4.4%, supraglottis 3.6%, subglottis 14%, aryepiglottic fold 16%, pyriform sinus 17% and posterior hypopharynx 17.6%.⁷ The overall five-year disease-specific survival for distant metastases was 6.4%. Distant metastases were related to advanced local disease (T3 + T4), lymph node metastases at presentation, tumor location (hypopharynx) and locoregional tumor recurrence. A meta-analysis of variables that predispose to a higher incidence of distant metastases include tumor location (hypopharynx more than larynx), advanced primary disease (T3 + T4), regional disease, locoregional recurrences, and advanced regional metastases (N2 + N3). The most common site of distant metastasis via blood stream is the lung; however, metastases to the brain, the adrenal, and the liver have also been reported.⁸ Metastasis to inguinal lymph nodes, as in

our case, is very rare.⁹

The probable explanation of this metastasis is the retrograde lymphatic spread through thoracic duct, para-aortic lymphatic channels to inguinal lymph nodes.

References

1. Beenken SW. Laryngeal cancer (cancer of the larynx). Armenian Health Network. Available from <http://www.health.am/cr/laryngeal-cancer/>. N.D. Retrieved 2007-Mar-22.
2. Hafidh M, Tibbo J, Trites J, et al. Radiotherapy for T1 and T2 laryngeal cancer: the Dalhousie University experience. *J Otolaryngol Head Neck Surg*. 2009;38:434-9.
3. Dirix P, Lambrecht M, Nuyts S. Radiotherapy for laryngeal squamous cell carcinoma: current standards. *Expert Rev Anticancer Ther*. 2010;10:1461-9.
4. Newlin HE, Amdur RJ, Riggs CE, et al. Concomitant weekly cisplatin and altered fractionation radiotherapy in locally advanced head and neck cancer. *Cancer*. 2010; 116:4533-40.
5. Dagan R, Morris CG, Kirwan JM, et al. Elective neck dissection during salvage surgery for locally recurrent head and neck squamous cell carcinoma after radiotherapy with elective nodal irradiation. *Laryngoscope*. 2010;120:945-52.
6. Traserra J, Arias C, Comas J, et al. Distant metastases originating from tumors of the larynx and hypopharynx. *Rev Laryngol Otol Rhinol (Bord)*. 1989;110:267-71.
7. Hoekstra CJ, Levendag PC, van Putten WL. Squamous cell carcinoma of the supraglottic larynx without clinically detectable lymph node metastases: problem of local relapse and influence of overall treatment time. *Int J Radiat Oncol Biol Phys*. 1990;18:13-21.
8. Spector GJ. Distant metastases from laryngeal and hypopharyngeal cancer. *ORL J Otorhinolaryngol Relat Spec*. 2001;63:224-8.
9. Plaza JA, Perez-Montiel D, Mayerson J, et al. Metastases to soft tissue: a review of 118 cases over a 30-year period. *Cancer*. 2008;112:193-203. Available from <http://dx.doi.org/10.1002/cncr.23151>.