

Laryngeal Neuroendocrine Carcinoma with Skin Metastasis

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Abstract

Neuroendocrine tumors are epithelial neoplasms with predominant neuroendocrine differentiation. These tumors can arise from any organ system. Laryngeal neuroendocrine neoplasms are very rare with the frequency of 0.6% of all laryngeal malignant neoplasms. There are nadir case reports in the literature with skin metastasis from laryngeal neuroendocrine tumors. Herein, we present a male patient with laryngeal neuroendocrine carcinoma in whom skin metastasis developed while his follow up.

Keywords: Neuroendocrine carcinoma; Larynx

Introduction

Laryngeal neuroendocrine carcinoma is a rare type of non-squamous type of larynx carcinomas and it accounts for 1% of all laryngeal cancers. Laryngeal neuroendocrine carcinomas originate from argyrophilic cells of the mucosa and most common location site is the supraglottic area. It usually develops in men aged between 50-83 years old and heavy smokers. Distant metastases are usually detected at bone, lung, liver and lymph nodes while skin metastasis can occur in 20% of the patients [1].

Herein, we present a male patient with laryngeal neuroendocrine carcinoma in whom skin metastasis developed while his follow up.

Case Report

A 65 year-old male patient admitted to the hospital with dysphonia complaint. A mass was established at the supraglottic area in direct laryngoscopic evaluation. The histological examination of the biopsy from the mass was consistent with neuroendocrine tumor. Partial laryngectomy and neck lymph node dissection was performed. The pathological stage was

determined as T1N2M0 and clinical stage was stage 3A. Surgical procedure was followed by adjuvant radiotherapy.

7 months later, multiple erythematous nodular skin lesions occurred on the scalp, chest and neck. Multiple excisional biopsy specimens from these lesions was sent to histological examination. Light microscopic examination of the specimens which were stained with H&E revealed that there is cellular neoplasm infiltration between collagen fibers in the dermis. The immunohistochemical study demonstrated that neoplastic cells stained positive for PanCK, chromogranin, CD56 and negative for ER and PR. As the histological examination was compatible with neuroendocrine tumor metastasis, patient was treated with a chemotherapy protocol including etoposide and carboplatin.

Third cycle of etoposide and carboplatin protocol was followed by PET-CT scan to assess clinical response. High FDG uptake was established at the retropharyngeal area, tracheostomy region and lungs (SUVmax: 5.8) and these findings were accepted as clinical progression. The patient was discharged with a palliative irinotecan consisting chemotherapy regimen.

Discussion

Although larynx is the most common site of head and neck cancers, larynx cancer accounts for 2-5% of all malignancies. Most common histological type is squamous type while neuroendocrine carcinoma is too rare with the frequency of 0.6 per cent of all laryngeal neoplasms. First case report about LNN was reported in 1969 by Goldman et al. and from the historical perspective; there are several classifications of laryngeal neuroendocrine neoplasms (LNN). In 1985 Woodruff et al. suggested to divide LNN into two groups, i.e. large cell neuroendocrine carcinoma and small cell neuroendocrine carcinoma [2]. In 1988 Wenig et al. made a classification of LNN that contains three groups of well differentiated, moderate differentiated and undifferentiated neuroendocrine carcinomas [3]. In 1991 Ferlito et al. divided laryngeal neuroendocrine tumors into two main groups which are very similar to current classification: those of epithelial (typical carcinoids, atypical

carcinoids and small cell neuroendocrine carcinoma which contains oat cells on the light microscopic examination) and those of neural origin (paraganglioma) [4]. LNN cases also can be divided into primary and secondary types, although the latter group which are cases that laryngeal metastasis from rectum, prostate and lung constitutes a small portion [5-7].

Skin metastases are not seen rarely in patients with LNN. The most common histological type of LNN with skin metastasis is atypical carcinoid. Although previous reports have described that local excision is the only effective treatment for skin metastasis of LNN, in 2009, Simpson et al. presented a case which is successfully treated with CO₂ laser [8].

Assi et al. reported a similar patient with laryngeal neuroendocrine carcinoma in whom eyelid skin metastasis developed after 3 years of diseases free survival and they treated metastatic skin lesions by surgery and chemotherapy like in our case [9]

This case teaches us that skin metastasis can be seen in patients with laryngeal neuroendocrine carcinomas and metastasis should be suspected in patients with nodular skin lesions.

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