

폐전이를 동반한 성문 하에서 발생한 선양낭성암종 1예

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Subglottic Adenoid Cystic Carcinoma with Lung Metastasis: A Case Report

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Adenoid cystic carcinoma (ACC) of larynx is a rare disease, accounting for less than 1% of laryngeal malignancies. These tumors arise almost exclusively in the subglottic and supraglottic regions, while the proportion of glottic ACCs is small. We describe a case of a young man with a subglottic adenoid cystic carcinoma. The patient underwent laryngeal microscopic surgery and radiotherapy. Five years after radiotherapy, local recurrence and distant metastasis (lung and kidney) was detected and he underwent palliative chemotherapy and local treatment. He is still alive for seven years after the initial diagnosis. The treatment strategies for laryngeal ACC are still controversial due to the rarity of the condition. We suggest that multimodality approach may be helpful in deciding a treatment option, and thorough and consistent follow-up for recurrence is mandatory for these patients.

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KEY WORDS Adenoid cystic carcinoma · Larynx · Lung metastasis · Recurrence.

Introduction

Adenoid cystic carcinoma (ACC), previously known as cylindroma, is a well-recognized pathologic entity of high-grade malignancies of the salivary glands.¹⁾ It may grow quickly or slowly, may metastasize to regional lymph nodes and distant sites, and shows perineural involvement. Recurrence may appear many

years after initial treatment.²⁾ ACC accounts for 60% of malignant neoplasms of the submandibular and minor salivary glands, but ACC of the glottis is rare, accounting for less than 1% of laryngeal malignancies.³⁾ Most laryngeal ACCs present in the supraglottic or subglottic areas, where the distribution of subepithelial glands is greater compared with the glottis.⁴⁾ Only small numbers of subglottic ACC have been reported in the English literature, most of which did not referred to long-term follow-up results or treatment. We report a patient with subglottic ACC that recurred long after local therapy. The patient received a multimodal treatment for survival prolongation and symptom control.

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Case Report

In April 2003, a 34 year-old man was referred to the hospital with an 8-month history of hoarseness and resting dyspnea. He was diagnosed with asthma and received anti-infection and anti-asthma medication in a general hospital for 5 months, only to have no response. He was a non-smoker and had no other medical history. On physical examination, the patient showed inspiratory stridor, but no cervical mass or lymphadenopathy was detected. Indirect laryngoscopy revealed a protruding papillary mass on the subglottic area. There was slight impairment of laryngeal motion, but the laryngeal mucosa seemed intact without necrosis.

A neck radiography revealed a subglottic mass in the lower cervical level (Fig. 1), and computed tomography (CT) disclosed a 12-mm mass on the subglottic area with invasion into the surrounding cricoid and arytenoid cartilage. Also, direct invasion through membranous portion of upper trachea was suspected. No evidence of nodal involvement was detected.

At surgery, laryngoscope and operating microscope

were applied. Huge mass was noted on the right posterior subglottic area. It was consisted by two part (anterior, posterior). The patient underwent laser microscopic surgery without neck dissection (Fig. 2). The pathology was ACC of a solid and cribriform type (Fig. 3) with perineural invasion. There was a significant improvement of the symptom of hoarseness after surgery. Because of incomplete resection with high probability of remnant tumor, postoperative radiotherapy (7,020 cGy/35 fractions) ensued on the laryngeal and hypopharyngeal areas. ^{18}F -FDG PET scan was taken six months after radiotherapy. Post-radiotherapy ^{18}F -FDG PET scan did not demonstrate any evidence of disease-specific uptake, and routine examinations were done at regular intervals.

In November 2008, however, the patient presented with aggravating hoarseness. Indirect laryngoscopy showed local recurrence resulting in decreased true vocal cord mobility and para-median fixation. ^{18}F -FDG PET scan showed local recurrence on glottis and subglottic level and multiple lung metastases (Fig. 4). His performance status was ECOG 1. The patient received palliative chemotherapy [5-fluorouracil (1,000

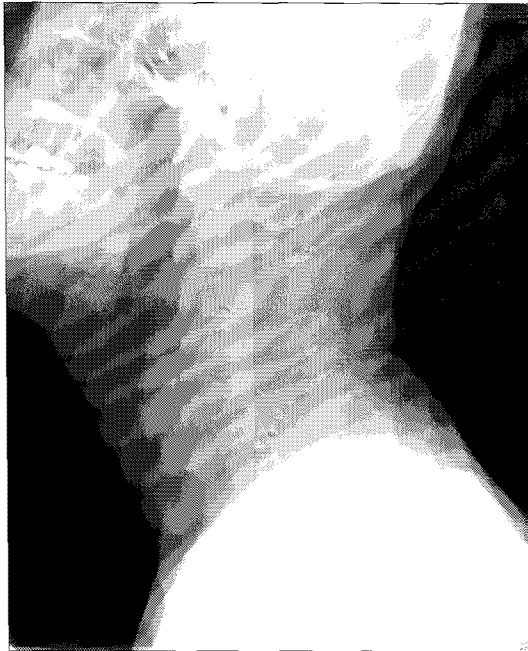


Fig. 1. Lateral neck view showing a retropharyngeal mass in the lower cervical level.

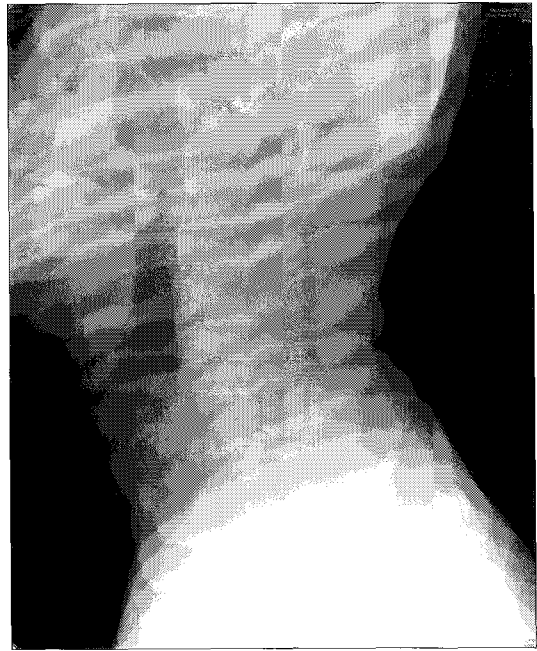


Fig. 2. A previously noted abnormal protruding soft tissue lesion is removed after microscopic surgery.

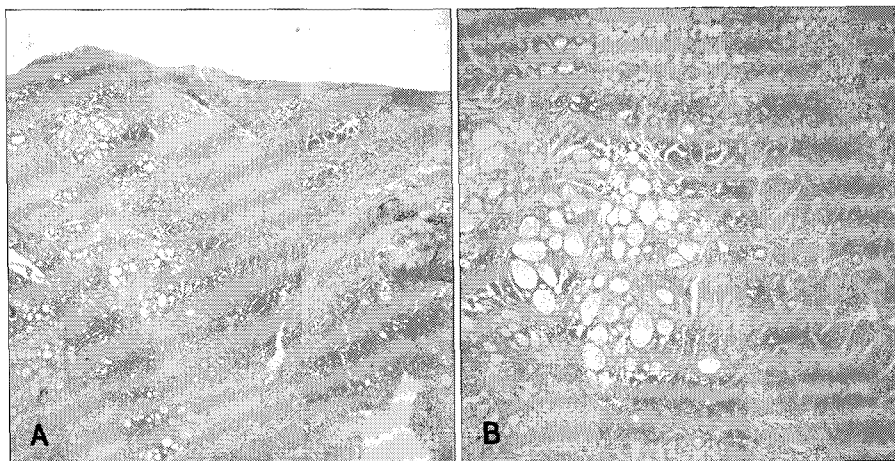


Fig. 3. Histopathological findings. A: The low power view shows an ill defined tumor lesion with cribriform and solid areas (H&E $\times 40$). B: The bland looking tumor cells are arranged in a mixture of cribriform and solid patterns (H&E $\times 100$).

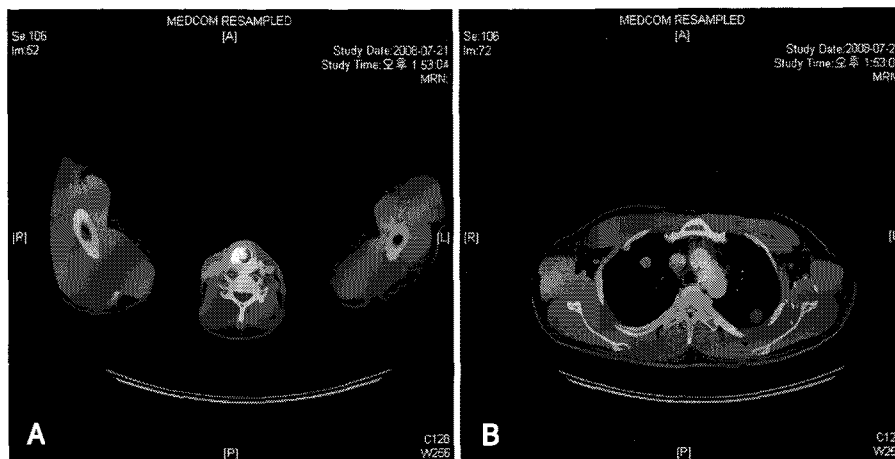


Fig. 4. PET-CT shows the recurrent larynx (A) and metastatic lung nodules (B).

mg/m², protracted continuous infusion, days 1 to 3) plus cisplatin (20 mg/m², intravenous (IV) infusion, days 1–5) repeated every four weeks. After cycle 2, the tumor response was stable disease (SD) by the RECIST criteria, but after cycle 4, his creatinine clearance (CCr) was reduced to 43 mL/min and a new metastatic lesion was detected at the right kidney. We decided to change chemotherapy regimen to vinorelbine monotherapy (25 mg/m², IV infusion, day 1 and 8) every three weeks. SD was maintained for eight cycles. His time-to-progression was 26 weeks with the dose intensity of 0.92. Then, he complained of increased amount of blood-tinged sputum and received additional microscopic surgery after confirming that the

recurred mass increased in size. The excised specimen was 1.8 \times 1.5 cm. A follow up examination showed progressive disease of lung and renal metastasis. He refused further treatment due to decreased performance status (ECOG 2) and renal function (CCr 35 mL/min). At the time of the last follow up, local recurrence persisted and multiple lung metastasis were more enlarged (2.7 cm \rightarrow 3.0 cm, 2.0 cm \rightarrow 2.7 cm). Also renal metastasis were more progressed (3.1 \times 2.2 cm \rightarrow 4.1 \times 3.9 cm in mid pole, 1.6 cm \rightarrow 3.5 cm in lower pole). Seven years after the initial diagnosis, the patient is still on regular examinations (Overall survival 84 months).

Discussion

According to Dexeuble et al., 64% of laryngeal ACCs occur in the subglottis, 25% in the supraglottis. Only 5% of ACC occurs in the glottis and remaining 6% involves all larynx (transglottis).⁵⁾ We showed here that subglottis ACC could be mistaken for asthma at first presentation. ACC usually begins as an asymptomatic mass, being often disregarded until it reaches an advanced stage.⁶⁾ Moreover, due to prolonged coughing and wheezing, it is likely to be mistaken for asthma as this patient.⁷⁾

Three pathologic subtypes have been identified: cribriform (least aggressive), tubular, and solid (most aggressive).⁴⁾ A remarkable feature of this neoplasm is its propensity to invade major nerves and spread along the perineural and endoneural sheaths. Once a diagnosis of laryngeal ACC is established, staging procedures are important. Although these tumors often follow an indolent course, as many as 40% of patients ultimately develop regional and distant metastasis. Therefore, evaluation for distant metastases should be carried out in all patients.⁸⁾ The lungs are the most frequent site of distant metastasis⁴⁾ sometimes occurring several years after local treatment, as in this patient. Therefore, neck CT or ¹⁸F-FDG PET scan was needed at least once a year for detection of recurrence.

The treatment options for laryngeal ACC remain controversial due to the rarity of the condition. Surgery with or without post operative radiotherapy remains the most common treatment for laryngeal salivary gland carcinoma.⁴⁾ UCLA study suggest total laryngectomy is mandatory due to frequent submucosal and perineural invasion of laryngeal ACC whereas Ferlito et al. suggest larynx preserving surgery is possible if the tumor size is small.⁸⁾ Larynx preserving surgery was reported only once in domestic journal and the patient was pathologically stage I. In early stage, larynx preserving surgery should also be considered. Perineural invasion has significant prognostic importance and must be taken into account when evaluating treatment options, especially postoperative radiotherapy. Lymph node metastases are relatively uncommon at the time of presentation.⁹⁾ Therefore, in

the absence of neck metastasis, neck dissection is not recommended. Neck dissection should be performed in patients who have clinically or histologically confirmed node metastases.⁸⁾

Radiotherapy alone usually has a minor role in treatment. It may be reserved for ACC with positive surgical margins, perineural spread or high grade tumors.⁴⁾ The role of chemotherapy for recurrent ACC is not defined either. Cisplatin, doxorubicin, and fluorouracil are active agents against adenocarcinoma-like salivary gland tumors.¹⁰⁾ Small randomized studies have suggested that vinorelbine shows moderate activity with or without cisplatin. However, the optimal drug combination remains undefined. Patients with bulky diseases, impaired performance status, or marginal nutritional status might be the subject of supportive care only.

Survival rate of ACC is not defined for laryngeal ACC. A previous report showed 5-year survival rate of 44%,⁹⁾ but ACC growth rates can vary widely. This patient received multi-modality treatment comprising surgery, radiotherapy and chemotherapy for symptom control and survival prolongation. Since standard treatment guidelines for this type of tumor are not yet established, we believe that a multi-modality approach should be applied to such patients. To conclude, we report a case of subglottis ACC treated with a multi-modality treatment. This may be helpful for making decisions about treatment strategy, and thorough and long-term follow-up for local and systemic recurrence is mandatory for these patients.

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