Case Report

Dysphonia in geriatric cases always needs fiberoptic laryngoscopy/bronchoscopy: Spindle cell carcinoma of larynx, a rare entity

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ABSTRACT

Spindle cell (sarcomatoid) carcinoma is a rare variant of squamous cell carcinoma (SCC). It compromises of 2–3% of laryngeal cancers. Tumor arises from the oral cavity, tonsil larynx, and pharynx. Tumor is majority times misdiagnosed as reactive lesions or mesenchymal malignancies. It is considered to be a biphasic tumor that is composed of an SCC (*in situ* or invasive) and spindle cell carcinoma (SpCC) with sarcomatous appearance. In this case report, 61-year-male with minimal throat pain and acute onset dysphonia misdiagnosed and treated as a case of bronchial asthma with gastroesophageal reflux confirmed to have exophytic laryngeal growth is the cause for clinical presentation. We performed fiberoptic laryngoscopy and diagnosed to have SpCC of larynx. High index of suspicion is a must in geriatric cases with documented history of smoking and fiberoptic laryngoscopy/bronchoscopy found to be crucial in the evaluation. Histopathology expertise in surgical oncology is essential while planning treatment.

Key words: Dysphonia, fiberoptic laryngoscopy/bronchoscopy, spindle cell carcinoma of larynx

INRTODUCTION

Spindle cell carcinoma (SpCC) or sarcomatoid carcinoma of the larynx is a highly malignant variant of squamous cell carcinoma (SCC) that is very uncommon. Till date, only twenty cases are recorded of SpCC of larynx. Because most of the spindle cell tumors are polypoid and pedunculated and tend to cause obstructive symptoms such as hoarseness, dyspnea, and dysphagia most tumors without metastasis are detected early, and prognosis is excellent.[1]

CASE REPORT

A 61-year-old male with a history of twenty pack-year smoking index came to outdoor unit of Pulmonary Medicine for complaints of dysphonia, minimal throat pain, and shortness of breath (Grade I) since last 5 months. He consulted general physicians and ENT surgeons and general surgeons on many occasions, received symptomatic treatment with a short course of antibiotics and cough expectorants with partial relief of symptoms. There was no history of hemoptysis, weight loss, neck masses, or any signs suggestive of any chronic debilitating disease or cancer.

In the outdoor unit, we offered complete blood count and sputum for gram and Zeihl–Nelson stain which revealed no diagnostic clue. Chest X-ray with neck posteroanterior and lateral view was taken, which was showing precricoid narrowing and we advised for bronchoscopy. We proceed to the fiberoptic bronchoscopy [Figure 1] and documented exophytic mass lesion overlying true vocal cords and taken three to four biopsy specimens from different sites. All four biopsy specimens reported as reactive hyperplasia and

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with full of necrosis overlying it. Exact histopathological diagnosis was not made and we referred patient to Ear, Nose, and Throat Department and evaluated with fiberoptic laryngoscopy.

Fiberoptic laryngoscopy [Figure 1] showing laryngoscopy revealed a mass covering the vocal cords at 70°.

No neck nodes were clinically palpated. The patient underwent tracheostomy with the suspected risk of obstruction. The patient was posted for microlaryngeal surgery, but the complete excision was not possible.

CT scan [Figure 2] revealed a mass in laryn × 5 cm × 6 cm till epiglottis with neck lymph nodes.

The patient was posted for total laryngectomy with modified radical neck dissection. Complete excision of mass was done with laryngectomy, and bilateral neck nodes were excised. Permanent tracheostomy was done during this procedure and patient recovered well. The findings of histopathology were conclusive with spindle cell variant of SCC of larynx and lymph nodes were negative for metastasis [Figure 3].

DISCUSSION

SCC is considered to be the most common type of malignant laryngeal tumor. SpCC or sarcomatoid carcinoma is a highly malignant variant of SCC. It is a rare tumor with a reported incidence of 2–3% of all laryngeal cancers. SpCC is also considered to be a monoclonal epithelial neoplasm with the sarcomatous component derived from squamous epithelium with divergent mesenchymal differentiation.[1,2]

Although the exact cause of SpCC is not known, it is strongly associated with a history of cigarette smoking and alcohol abuse. It has also been suggested that SpCC is associated with radiation exposure although the determination of radiation risk may be complicated by the dose and duration of radiation exposure. SpCC is more predominant in men compared to females (12:1 ratio) although it is becoming more common in females and it is usually seen in the 6th and 7th decades of life.[3]

SpCC most commonly affects the glottis in the majority of cases (70%), and the majority of patients present with symptoms of hoarseness, dyspnea, cough, and dysphagia often of <1-year duration. The majority of these tumors are characterized as being polypoid or pedunculated (98.9%) tumors that are often <2 cm in size.[2,4]

The diagnosis of SpCC requires histological demonstration of both the squamous cell component and the spindle

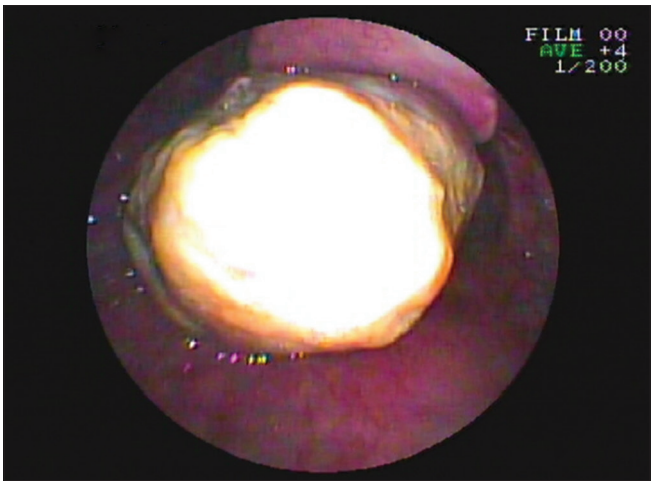

Figure 1: Mass covering the vocal cords and adjacent to epiglottis

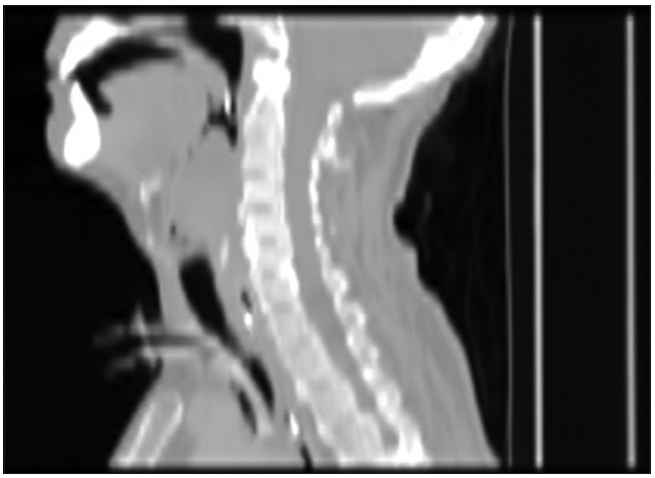

Figure 2: Computed tomography neck showing mass till epiglottis

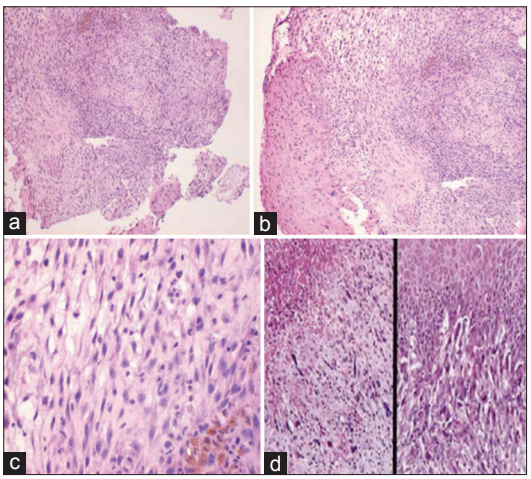

Figure 3: Histological findings: Loose myxomatous fibrous connective tissue containing both spindle-shaped cells as well as ovoid cells with hyperchromatic, pleomorphic nuclei with eosinophilic cytoplasm. In some areas, cells assumed a whirling interlacing pattern and at one margin dysplastic-stratified squamous epithelium characterized by cells with pleomorphic hyperchromatic nuclei. Histopathology revealed spindle cell variant of squamous cell carcinoma

shape cells with sarcomatous appearances. The histological examination can often show the presence of SCC at the surface or deeper within the tumor although this is rare especially with tumors where the surface is ulcerated or denuded. It is often seen is a blending of squamous cells and spindle cells which can be differentiated by their different arrangement which includes storiform, solid, and fascicular appearance. In about half of cases, there is also a desmoplastic stromal fibrosis and because the epithelial cells are capable of transforming into sarcomatoid spindle cells, it is not uncommon to see the presence of bone and cartilage and or osteosarcoma and chondrosarcoma on histology.[1,4]

Tumors that are stage T2 or less can be managed conservatively with limited field irradiation and conservative treatment to preserve the patient's voice. Tumors that are stage 3–4 can be treated with local resection, partial laryngectomy, total laryngectomy with or without lymph node dissection followed by a combination of radiation therapy and chemotherapy. SpCC of the larynx has a very good 5-year prognosis of 65–95%. Poor prognostic factors include tumors diagnosed at higher stages, large tumors (>3 cm) with a predominance of epithelial component, nonglottic tumors, fixed vocal cords, history of radiotherapy and metastasis to regional lymph nodes, and distant metastasis.[5,6]

CONCLUSION

SpCC or sarcomatoid carcinoma of the larynx is a highly malignant variant of SCC that is very uncommon. Because most spindle cell tumors are polypoid and pedunculated and tend to cause obstructive symptoms such as hoarseness, dyspnea, and dysphagia most tumors without metastasis are detected early and tend to have a very good 5-year prognosis. High index of suspicion is a must in geriatric cases with documented history of smoking and fiberoptic laryngoscopy/bronchoscopy found to be crucial in evaluation, which will help to diagnose cases with ease and having favorable outcome. Histopathology expertise is a must and at least six to seven biopsy specimens are sufficient to avoid repeat procedure due to the chance of crush artifact or superficial necrosis over tumor lesion.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Völker HU, Scheich M, Höller S, Ströbel P, Hagen R, Müller-Hermelink HK, *et al.* Differential diagnosis of laryngeal spindle cell carcinoma and inflammatory myofibroblastic tumor – Report of two cases with similar morphology. Diagn Pathol 2007;2:1.
2. Katase N, Tamamura R, Gunduz M, Murakami J, Asaumi J, Tsukamoto G, *et al*. A spindle cell carcinoma presenting with osseous metaplasia in the gingiva: A case report with immunohistochemical analysis. Head Face Med 2008;4:28.
3. National Cancer Institute. Cancer facts. Head and neck cancer: Questions and answers. National Cancer Institute; 2012
4. Thompson LD, Wieneke JA, Miettinen M, Heffner DK. Spindle cell (sarcomatoid) carcinomas of the larynx: A clinicopathologic study of 187 cases. Am J Surg Pathol 2002;26:153-70.
5. Lewis JE, Olsen KD, Sebo TJ. Spindle cell carcinoma of the larynx: Review of 26 cases including DNA content and immunohistochemistry. Hum Pathol 1997;28:664-73.
6. Lewis JS, Ritter JH, El-Mofty S. Alternative epithelial markers in sarcomatoid carcinomas of the head and neck, lung, and bladder-p63, MOC-31, and TTF-1. Mod Pathol 2005;18:1471-81.