Multiple Primary Malignancies and Bilateral Vocal Cord Paralysis Confusing the Management of Each Other

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Abstract

Double primary malignancy though uncommon, we often encounter in our clinical practice. The lung malignancy is known to cause left vocal cord paralysis. Bilateral abductor paralysis secondary to adenocarcinoma of the lung with concurrent basal cell carcinoma of the face is not common. Proper counseling and timely management are needed in these cases of multiple primary malignancies. Early evaluation in all cases of hoarseness can help in early diagnosis and management.

Introduction

Double primary malignancy is not uncommon.1–4 In 1934, Bugher was the first to analyze double primary malignancy statistically.5 The prevalence of multiple primary malignancies ranges from 0.7 to 11.7%.6 Most diagnosed double primary were metachronous in comparison to synchronous.7 The increased incidence of double primary is probably due to possible genetic susceptibility and exposure to environmental carcinogens.8 The mean age for reporting second primary cancer is around 50 years or above.9–11 Patients with digestive, urogenital, and respiratory tumors are likely to develop multiple primary metachronous tumours.12 Metastasis of basal cell carcinoma is rare, ranging between 0.0028 and 0.55%.13 Here, we present a rare case of basal cell carcinoma of the skin along with adenocarcinoma of the lung with bilateral vocal cord palsies.

Case Report

A 44-year-old man, known diabetic, presented with hoarseness of voice for 3 months. He gave a history of pulmonary tuberculosis and completed antitubercular treatment 2 years ago. On examination, we noted a single, nontender, blackish growth measuring about 2 × 1 cm on the left side of the nose, adjacent to the medial canthus of the left eye (→ Fig. 1A). The patient noticed it but did not seek medical help considering it a normal mole. On indirect laryngoscopy and video laryngoscopy, the bilateral vocal cords were in the paramedian position (→ Fig. 1B). Contrast-enhanced computed tomography showed mild enhancing wall thickening of the esophagus, with enhancing nodular lesion of the right lobe of the liver (→ Fig. 2A). Multiple enlarged lymph nodes were noted in the pretracheal, paratracheal, tracheobronchial, and right supraclavicular area, with multiple nodules in both thyroid lobes (→ Fig. 2B). Flexible gastroesophageal endoscopy was normal. Bronchoalveolar lavage was suggestive of malignant nonsmall cell lung carcinoma. Biopsy from the lateral basal segment of the right lower lobe bronchus mass suggested moderately differentiated adenocarcinoma (→ Fig. 3A). The molecular study was positive for ALK (D5F3) and negative for ROS1 (D4D6) (→ Fig. 3B). Magnetic resonance imaging metastasis workup showed marrow signal changes involving multiple vertebrae, pelvic bones, and neck of the left femur, showing diffusion restriction.

Keywords

► adenocarcinoma of lung
► multiple primary
► vocal cord palsy

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Fig. 1  (A) Blackish growth on the left side of the nose, adjacent to the medial canthus of the left eye. (B) Vocal cords in paramedian position.

Fig. 2  (A) Contrast-enhanced computed tomography (CECT) neck with thorax showing enlarged nodular lesion of right lower lobe. (B) CECT neck, red arrow showing enlarged right paratracheal lymph node, yellow arrow showing nodule in the right lobe of thyroid.

Fig. 3  (A) Microscopic picture of adenocarcinoma showing tumor cells arranged in acinar formation with high nuclear-to-cytoplasmic ratio (10× magnification). (B) Immunohistochemistry suggestive of positive ALK (D5F3) marker (10× magnification).
suggestive of metastasis, without any intracranial metastasis. The biopsy from the nasal lesion was suggestive of basal cell carcinoma (Fig. 4). Fine-needle aspiration cytology of the pretracheal lymph node was suggestive of metastatic adenocarcinoma, whereas in thyroid it was suggestive of colloid nodular goiter. Considering the metastatic spread of the adenocarcinoma, the patient was started on chemotherapy meanwhile kept under close observation for the progression of basal cell carcinoma and development of respiratory stridor. The patient underwent six cycles of chemotherapy \((\text{pemetrexed/carboplatin } \times 6 \text{ cycles } + \text{GCSF } \times 4 \text{ cycles and crizotinib})\). Positron emission tomography after six cycles of chemotherapy was suggestive of a partial response to chemotherapy. The basal cell carcinoma of the nose responded to the chemotherapy with significant reduction in its size. Currently, the patient is on crizotinib maintenance therapy on a compassionate basis due to his poor socioeconomic status until a complete response will be obtained. The patient refused to undergo surgical excision of basal cell carcinoma as there was a significant reduction in the size of the tumor and he wants to get it done later. At present, there is no stridor and the patient is kept on close observation.

**Discussion**

Multiple primary cancers are classified as synchronous and metachronous. Those malignancies observed at the same time or within 6 months are termed synchronous, and those cancers that develop at more than a 6-month interval are termed metachronous. Synchronous multiple primary cancers were first reported by Beyreuther. Second primary malignancies observed at the same time or within 6 months are termed synchronous, and those cancers that develop at more than a 6-month interval are termed metachronous.

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**Fig. 4** Microscopic picture of basal cell carcinoma showing basaloid cells seen in island arrangements, peripheral palisading pattern noted \((10 \times \text{ magnification})\).
cord palsy will be managed depending on the patient’s response to chemotherapy. Counseling the patient and providing adequate information regarding their condition plays a crucial role in managing multiple primary malignancies.

Conclusion

Malignancy is the most common extralaryngeal cause of vocal cord palsy. Surgical resection is the best modality of management for basal cell carcinoma unless it is in the advanced stage. Chemoradiation would be the ideal modality of management in dual malignancies. In conclusion, a thorough evaluation is a must while evaluating any malignancy to rule out the presence of a second primary.

Consent

Patient’s consent is taken.

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Conflict of Interest

None declared.

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