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Case Report

Tonsillar Metastasis from Sarcomatoidcarcinoma Lung- A Rare Presentation

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Abstract
Carcinoma lung rarely metastasize to palatine tonsils. Tonsillar metastasis from small cell lung cancer and adenocarcinoma have been reported in literature. Here we present a rare case of tonsillar metastasis from sarcomatoid carcinoma lung with a review of the literature.
Keywords: *tonsil , lung, sarcomatoid carcinoma.*

Introduction

Distant metastasis to palatine tonsils are rare and it forms only 0.8% of all tonsillar malignancies.[1] Tonsillar metastases originating from primary sites like lung, breast, esophagus, stomach, colorectum, kidney, and cutaneous melanoma have been reported. Small cell lung cancer forms the most common histological type of lung cancer metastasizing to tonsil.[2-4] Lung adenocarcinoma also metastasize to the palatine tonsils.[5-8] Here we report a case of tonsillar metastasis from sarcomatoid carcinoma lung.

Case Report

53 year old smoker male presented with cough and hemoptysis of 3 months duration. CECT thorax showed multilobulated well defined heterogenously enhancing lesion in right lung measuring 10×5.3×5cm with mediastinal and hilar lymphadenopathy. He underwent CT guided tru cut biopsy from lung mass and HPR was reported as poorly differentiated malignant neoplasm possibly high grade sarcoma/sarcomatoid carcinoma (figure 1a). Tumour cells were vimentin diffuse strong positive and cytokeratin negative (figure 1b). Meanwhile he underwent PET-CT for staging, which showed heterogenous FDG uptake along the periphery of right lung lesion (SUVmax 14.5), FDG avid mediastinal nodes, right tonsillar lesion (SUV25.5) and FDG avid enhancing lesions in both cerebral hemispheres (figure 2a). Clinical examination of oropharynx showed well defined lesion in right tonsil with smooth surface reaching up to midline

(figure 2b). Punch biopsy from tonsil came as poorly differentiated malignant neoplasm with spindle cell morphology and extensive necrosis (figure 3a).Tumour cells were negative for CK,P40, desmin, diffuse strong positive for vimentin and scattered cells positive for P63 (figure 3b). Finally a diagnosis of sarcomatoid carcinoma was made. Patient received one cycle of palliative chemotherapy with single agent adriamycin (combination chemotherapy not given due to poor general condition). Three weeks after first cycle of chemotherapy, he presented with head ache and altered behaviour and was treated with anti-cerebral edema measures and whole brain radiotherapy, 20 Gray in 5 fractions. He got symptomatic improvement after WBRT, but his general condition was not fit for continuation of chemotherapy and hence was offered best supportive care.

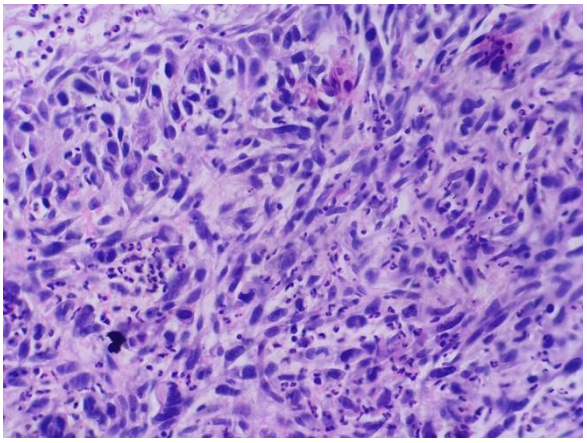

Figure 1a: Lung biopsy (H&E 400x) showing atypical spindly cells with scanty cytoplasm and pleomorphic nuclei (400x).

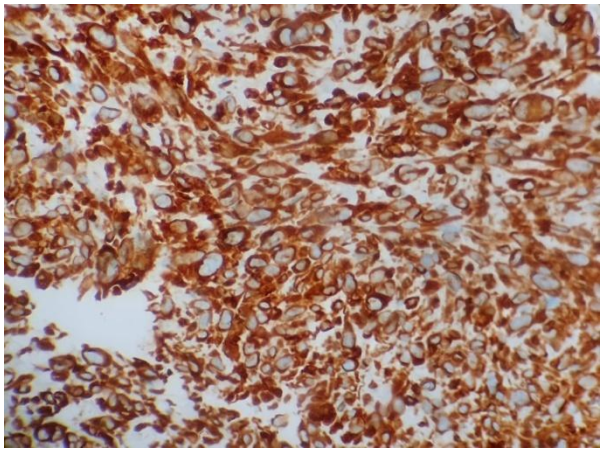

Figure 1b: Tumor cells showing diffuse strong positivity for vimentin (400x).

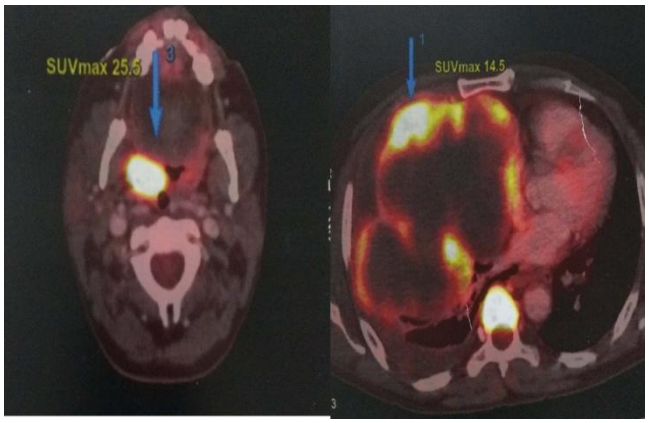

Figure 2a: PET CT showing heterogenous FDG uptake along the periphery of right lung lesion (SUV max 14.5) and FDG avid right tonsillar lesion (SUV25.5).

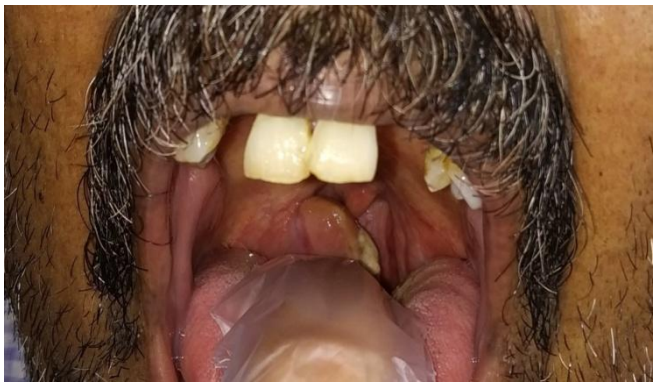

Figure 2b: well defined lesion in right tonsil with smooth surface reaching up to midline.

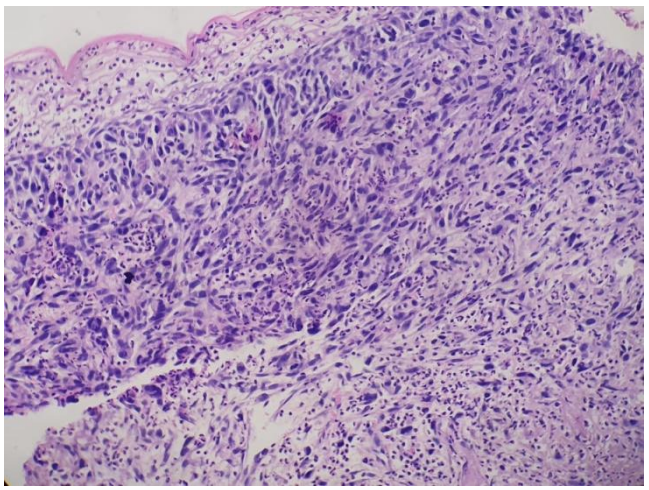

Figure 3a: Tonsil biopsy (H&E 400x) showing atypical spindly cells with same morphology as lung in sheets

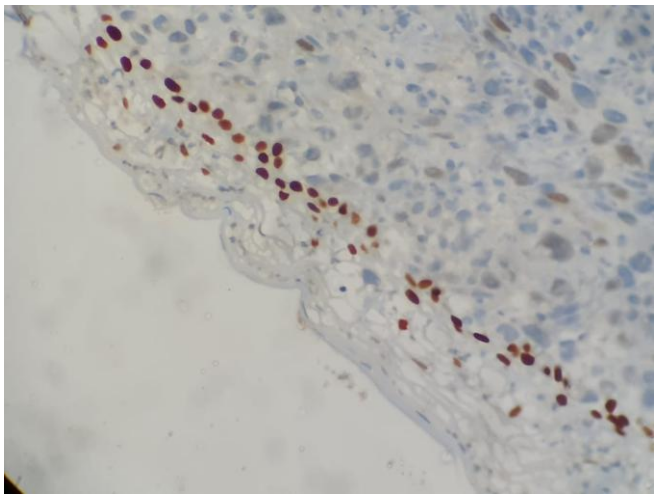

Figure 3b: A few tumor cells are moderate to weak positive for P63 (400x).

Discussion

Tonsillar metastasis from carcinoma lung is rare. Metastasis from Adenocarcinoma lung and small cell lung cancer have been reported previously. This is the first case of tonsillar metastasis from sarcomatoid carcinoma lung. The mechanism of tonsillar metastasis is not well understood, but the proposed mechanisms include hematogenous spread, retrograde cervical lymphatic spread through the thoracic duct, or implantation metastasis during bronchoscopy.[4,7]

Metastasis to tonsil usually produce symptoms like foreign body sensation, sore throat or referred otalgia. But in our patient there was no symptoms related to the tonsillar lesion. Tonsil being an unusual site of metastasis, a biopsy is needed to rule out second primary neoplasm in tonsil. In our patient the biopsy from tonsil revealed similar morphology and immunohistochemistry profile as that of primary lung malignancy and thus a diagnosis of metastasis to tonsil was made. This patient had multiple metastatic sites including brain and multiple vertebrae .Most of the reported literature show multiple metastatic sites,[5,8-9]but isolated unitonsillar metastasis from small cell lung cancer has been reported.[4]

There are no standard recommendations for treating tonsil metastasis from lung cancer. Surgery, chemotherapy and radiotherapy have been tried, all associated with poor outcomes. According to Brownson et al, the average life expectancy is less than 9 months in patients with tonsillar metastasis irrespective of the primary tumor histological type.[10] This patient had no brain or throat symptoms at presentation and hence he received palliative chemotherapy first followed by whole brain radiotherapy.

Conclusion

Tonsillar metastsasis from sarcomatoid carcinoma lung is extremely rare and is not reported in literature till date. Clinical suspicion is needed to identify such rare metastatic sites. Sarcomatoid carcinoma is an aggressive histological type with poor prognosis. The prognosis is even worse in patients with tonsillar metastasis.

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