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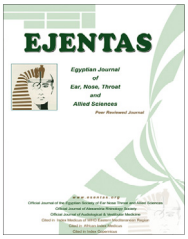

CASE REPORT

Simultaneous nasopharyngeal carcinoma with laryngeal squamous cell carcinoma and review of literature

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KEYWORDS

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Second primary carcinoma

Abstract The occurrence of second primary carcinomas (SPC) in aerodigestive tract is well recognized in the literature especially the lung and esophagus. The tumors are described according to the chronological presentation as simultaneous, synchronous and metachronous. Occurrence of second primary malignancy can be missed in early examination if they are not actively looked for. We are reporting the first and extremely rare presentation of nasopharyngeal carcinoma (NPC) presented simultaneously with laryngeal carcinoma with literature review and stress on the importance of pan-endoscopy in the management.

1. Introduction

Chronological description of multiple tumor occurrences is divided into synchronous when the second tumor appears within 6 months of index malignancy, metachronous when the duration is more than 6 months and simultaneous when tumors are diagnosed at the same time. Multiple primary tumors are well known in aerodigestive tract but simultaneous occurrence of NPC with laryngeal carcinoma is not reported yet in the English literatures.

2. Case report

An eighty year-old male was presented with 6 months history of hoarseness, dysphagia and stridor for 2 weeks duration. He denied nasal, otologic and aspiration symptoms. On physical examination he was cachexic, dehydrated, dyspnoeic with hoarseness and inspiratory stridor. There was clinical evidence of bilateral multiple cervical lymphadenopathy with the biggest measuring 3×3 cm. Awake flexible nasopharyngolaryngoscopy examination revealed exophytic mass within the nasopharynx originating from the right fossa of Rosenmüller (FOR) and huge exophytic lesion in the supra-glottic region. Vocal cord movement could not be assessed. In view of the patient's clinical condition, an emergency tracheostomy under

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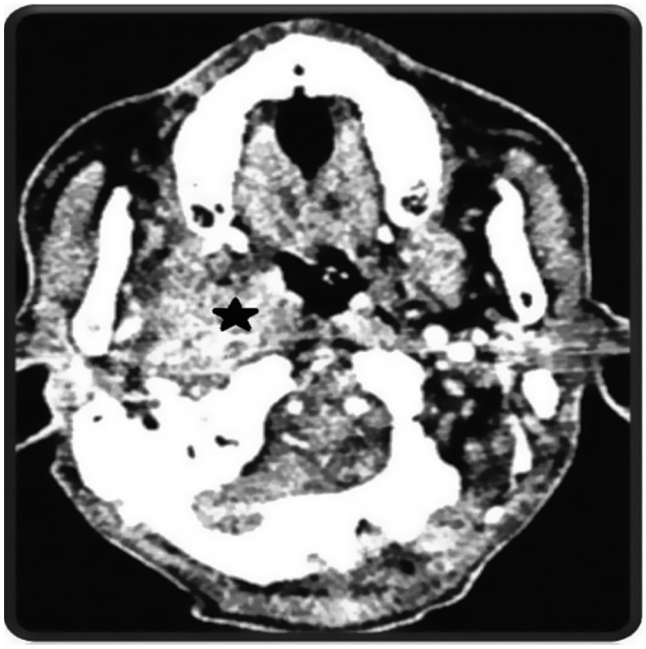

Figure 1 Contrasted CT scan showing soft tissue density at the right FOR with extension to the right parapharyngeal space (star).

local anesthesia was performed followed by direct endoscopic examination which revealed irregular mass involving the false and true vocal cords, anterior commissure, laryngeal surface of the epiglottis and inferior surface of the vocal cords with subglottic extension. Multiple biopsies were taken from the suspicious areas. CT scan showed soft tissue density at the right FOR extending to the right parapharyngeal space. Fig. 1 and another soft tissue density at the right laryngeal inlet at the level of the hyoid bone. Fig. 2 chest X-ray showed well defined nodular and cavitary lesion on the left lobe Fig. 3.

Histopathological examination revealed a non-keratinizing undifferentiated nasopharyngeal carcinoma with WHO classification type III and moderately differentiated squamous cell carcinoma of the larynx. The clinical, radiological and histopathological staging was stage IV with lung metastasis. Due to the advance stage of the disease palliative management was planned for the patient.

3. Discussion

Second primary carcinomas represent the leading cause of death among the head and neck carcinomas. Approximately one third of the mortality rate is caused by SPC, triple the number caused by distant metastasis.[1] The SPCs demonstrate the concept of field cancerization, in which carcinogens like tobacco, alcohol, genetic predisposition, environmental factors, HPV and EBV are known risk factors for head and neck malignancies; can induce a field of mucosal burden with premalignant disease which may elevate the epithelial cancer risk throughout the upper aerodigestive tract.[2]

Early detection of SPCs has vast impact on the prognosis and curative outcomes of the disease and this fact is well documented in the literature.[3]

Sandro et al.[3] in 358 endoscopic evaluations of patients with upper aerodigestive malignancies reported that incidence of second primary carcinoma (SPC) of 16.2% with 6.4% being synchronous, 9.8% metachronous and 3.1% of cases silent synchronous tumor was diagnosed.[3]

Haldun et al. in a study included 1112 patients of head and neck SCC reported that 7% rate of synchronous detection and 9% metachronous were mainly in the lung.[4]

Chuang et al in a pooled analysis of 13 center registries worldwide which included 99,257 patients showed the incidence of SPC of 10.9%. Lung was the most common site of involvement 30%, esophagus 5% and larynx 1.7%.[5] Remarkably, in

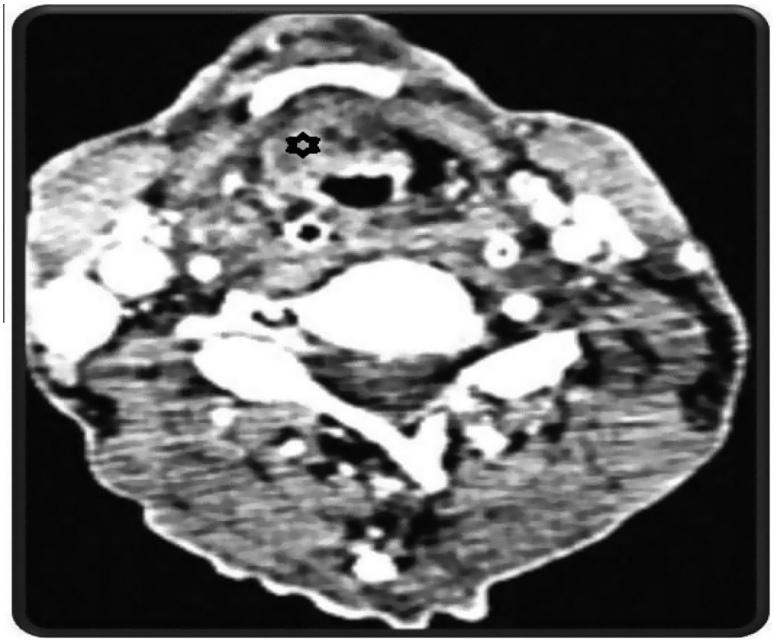

Figure 2 Contrasted CT scan at the level of hyoid bone showing soft tissue density at the preepiglottic space extending to the right paraglottic space.

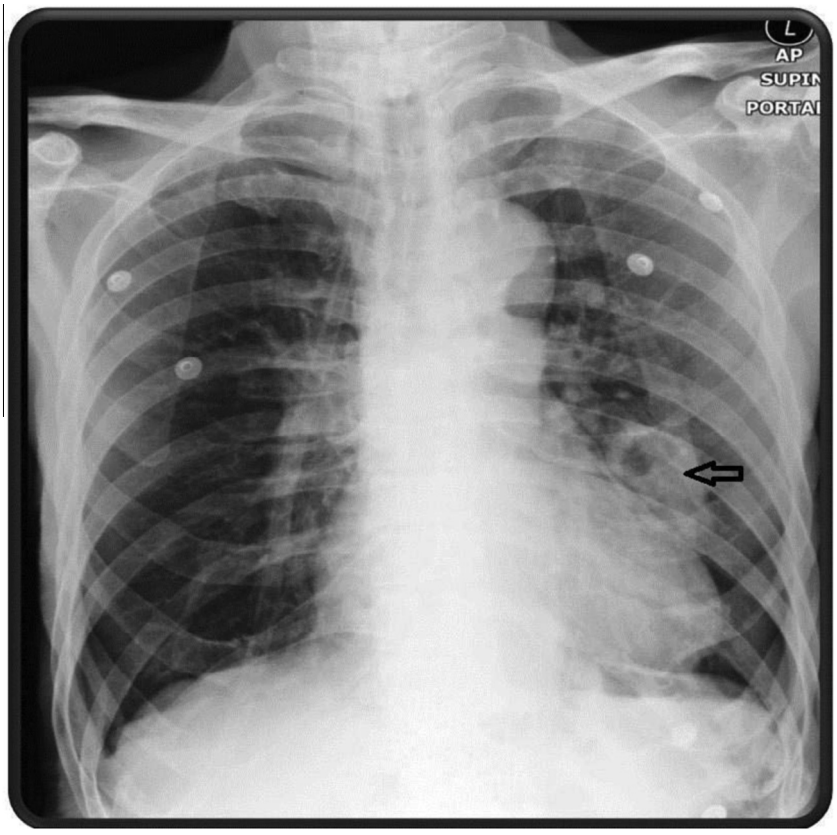

Figure 3 Chest X-ray showing multiple nodular cavitary lesions involving the left lung (arrow).

our literature review using Google scholar, PubMed in English from 1990 till date there were no cases reported of simultaneous NPC and laryngeal CA.

The role of pan-endoscopy compared to other investigations such as CT scan, MRI and PET in primary diagnostic workup has been discussed and even though the ratio of second tumor found by endoscopy is low but the most valuable finding is the silent asymptomatic simultaneous SPC, which will influence the prognosis and a curative outcome. It may also help to avoid unnecessary mutilating and radical treatment of the primary tumor.[6] Jones et al. concluded in contrast to the overall 5-year survival rate for head and neck cancer patients of approximately 50%, the 5-year survival rate in head and neck cancer patients who developed SPC was around 20% after the SPC was diagnosed. The 5-year survival rates after SPC diagnosis were above 30% if the SPC was also a head and neck cancer and decreased to 8% if the SPC was outside the head and neck area.[7]

4. Conclusion

In conclusion, SPCs in patients with head and neck cancer are not uncommon and represent a significant obstacle improving the survival rate. Multiple investigators have demonstrated that SPCs negatively impact survival in patients with head and neck cancer. For that reason, careful and detail assessment is important to rule out synchronous lesion as it affects the management and the overall prognosis.

Conflict of interest

None declared.

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