



Respiratory Medicine

A RARE CASE OF MALIGNANT PLEURAL EFFUSION RESULTING FROM SQUAMOUS CELL CARCINOMA OF TONGUE

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ABSTRACT Squamous cell carcinoma of tongue is a common malignancy within the head and neck region, however, distant metastasis from carcinomas of the tongue is quite rare and when it occurs, lymph nodes, lungs, liver, brain and bone are the known sites affected. Pleural involvement by squamous cell carcinoma of the tongue is distinctly rare and the latent period between the primary and distant metastasis is usually long. Detection of these metastasis are essential for staging and management of the patient. We hereby describe the case report of a 51 year female diagnosed with right malignant pleural effusion arising from distant metastasis of squamous cell carcinoma of tongue.

KEYWORDS : carcinoma tongue, pleural metastasis

INTRODUCTION

Squamous cell carcinoma (SCC) of tongue is a common malignancy within the head and neck region. Distant metastasis from carcinomas of the tongue is quite rare, however predilection is for lymph nodes, lungs, liver, brain and bone. Pleural metastases is distinctly rare and the latent period between the primary and distant metastasis is usually long.

Detection of these metastases is essential for staging and management of the patient. We hereby discuss the case report of a 51 year female diagnosed with right malignant pleural effusion as a result of distant metastasis of squamous cell carcinoma of tongue.

Oral cancer accounts for a large burden of cancer worldwide, being the sixth most common malignancy with incidence showing an increasing trend in developing countries. Widespread use of oral tobacco and alcohol consumption is the major form of incidence in this population.

Carcinoma of tongue demonstrates a locally invasive growth pattern with a tendency to metastasize regionally to lymph nodes.

Distant metastases, though rare, are typically seen in advanced stages and most commonly involve the lungs, bones, or liver. Malignant pleural effusion, however, is an unusual occurrence in cases of primary cancers of the oral cavity, including carcinoma tongue.

Malignant pleural effusion represents an advanced stage of cancer progression, characterised by the presence of malignant cells in pleural fluid, and is typically associated with poor prognosis. The occurrence of pleural effusion as metastases from SCC of the tongue is exceedingly rare, presenting both diagnostic and therapeutic challenges.

In this report, we present a rare case of malignant pleural effusion arising secondary to squamous cell carcinoma of the tongue, detailing the clinical presentation, diagnostic findings, and management approach. Through this case, we aim to highlight the unique metastatic potential of SCC of the tongue, underscore the diagnostic complexities involved, and provide insights into management strategies for such atypical presentations.

CASE REPORT

A 51 Year old female presented with complaints of sudden onset dyspnea since 7 days MMRC Grade 3, sudden in onset and progressive in nature. Cough with expectoration since 5 days. Patient was a diagnosed case of carcinoma tongue with stage T4aN3b detected on CT Neck 4 months back for which she was referred to a higher centre but chose not to undergo any further management. Patient gave a history of oral tobacco consumption in the form of mishri for more than 10 years. Her Chest radiograph was suggestive of right sided massive pleural effusion. Thoracic ultrasound (USG) guided thoracentesis was done in 3 consecutive attempts with a total of 2600ml hemorrhagic fluid was aspirated with the cytology was suggestive of epithelial malignancy.

Adenosine Diamine - 27.1

Lactate Dehydrogenase – 325

Suggestive of an exudate

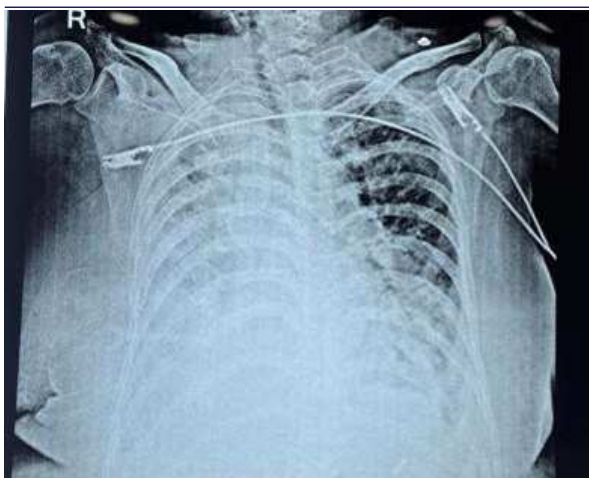
A pigtail catheter was inserted on the right side under USG guidance via the Seldinger technique and after following all aseptic precautions to facilitate further drainage. A total of 4450 of hemorrhagic fluid drained after which the pigtail was removed.

Tissue biopsy of tongue was taken which was suggestive of moderately differentiated Squamous cell carcinoma.

Positive Emission Tomography CT (PET-CT) revealed increased metabolic activity (SUV max -6.6) in soft tissue lesion involving right half of tongue, deposits in bilateral mediastinal and cervical lymph nodes (SUV max -8), increased metabolic activity in the left Ischium and D2 vertebra and Bilateral (moderate amount of right sided and minimal left sided) pleural effusion.

Oncology opinion was taken and was to be started on palliative chemotherapy and supportive care which comprised of Aprepitant Capsules 125mg, Injection Granisetron 3mg, Injection Paclitaxel 260mg for a total of 6 cycles.

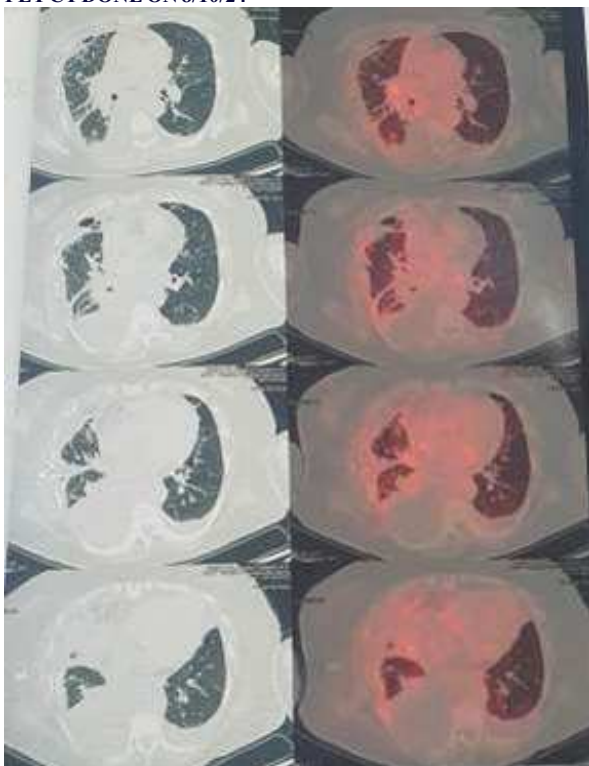
CHEST X-RAY SHOWING MASSIVE RIGHT SIDED EFFUSION WITH MILD LEFT SIDED EFFUSION



Post Pigtail Catheter Insertion CXR



PET CT DONE ON 8/10/24



DISCUSSION

Pulmonary metastases from head and neck cancers is an unusual phenomenon. When it occurs, it does so after a long latent period and

the usual sites involved are lungs, liver and bone.[1,2]

Pleural metastases is extremely rare and is associated with poor survival with very few cases reported till date. For such cases, early diagnosis and prompt evaluation, keeping a high index of suspicion to start early effective treatment as soon as possible.[4] Current knowledge on this topic is very limited and this case report is intended to add to the existing clinical experience and information provide the best standard of care.

This will aid in arranging timely referral, for effective management with the necessary interventions required for patients who present with this rare occurrence.[3,4]

Malignant pleural effusion (MPE) is a rare complication of carcinoma of the tongue. Its occurrence highlights the aggressive nature of the disease and suggests distant metastasis, which is uncommon for head and neck cancers like CA tongue.

Common metastatic sites: Carcinoma of the tongue typically metastasizes to cervical lymph nodes and, less commonly, to the lungs, bones, and liver.[6]

MPE is unusual in squamous cell carcinoma of tongue and is typically a feature of cancers with strong lymphatic or hematogenous metastatic potential, such as lung, breast, or ovarian cancer rarely involving pleura.

Treatment aims to palliate symptoms and manage the systemic disease by symptom control. Therapeutic Thoracentesis, Pleurodesis preventing recurrent effusions, options include talc pleurodesis or chemical agents, Indwelling Pleural Catheter. Systemic Therapy include Chemotherapy, Immunotherapy: Anti-PD-1 or anti-PD-L1 agents may be considered in tumors expressing relevant markers, Targeted Therapy: For actionable mutations (if identified) and Supportive Care:[7,8]

- Palliative care is critical to address symptom burden and improve quality of life.
- MPE associated with Ca tongue is a poor prognostic indicator, with survival often limited to months.
- Early detection of systemic metastasis and prompt initiation of systemic therapy may slightly improve outcomes in select patients.

The condition requires a multidisciplinary approach, focusing on symptomatic relief and systemic disease control.[15] Further studies on its occurrence and management in Ca tongue could enhance understanding and treatment strategies.

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