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UNMASKING THE GREAT IMITATORS – SPINAL TUBERCULOSIS MASQUERADING METASTASIS IN A DEVELOPING COUNTRY.

Pathology

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ABSTRACT

Spinal tuberculosis is more benign disease which may mask metastasis is in spine which needs to be identified and treated. The prevalance rate of squamous cell carcinoma metasis to spine is less than 2%. IHC markers play crucial role in distinguishing the primary lesion from Mets and proper retrograde history is mandatory. Microbiology testing further aids to rule out tuberculous infection.

KEYWORDS

Immunohistochemistry, metastasis, squamous cell carcinoma

INTRODUCTION:

Spinal tuberculosis and metastatic cancer are commonly diagnosed lesions in the spine. Spinal tuberculosis is a common benign disease, endemic in developing countries. When the typical signs of TB are not developed, the clinical manifestation can be very similar to metastasis and cannot be easily differentiated. Both spinal tuberculosis and metastases showed vertebral bone destruction and local mass on examination. MRI and Histopathological reports are mandatory for confirmation. Also, the prevalence of metastasis of squamous cell carcinoma to spine is extremely rare, which further require use of IHC and biopsy for confirmation.

CASE REPORT:

A 63year male, came with bilateral lower limb weakness and numbness, restricted movement and backache and was bedridden for the same. CT report showed destructive lesion in D5 and D12 vertebral body. CT Guided Biopsy revealed from outside hospital brought by patient showed Granulomatous lesion. Following that culture TB and Gene Xpert MTB was done which was negative for Acid fast bacilli. On further taking going retrograde patient found to have been operated for buccal carcinoma 5 months back and has completed chemotherapy cycle.

MATERIAL AND METHOD:

Received excised tissue from epidural space containing multiple, grey-white to grey-brown, soft to firm tissue bits all aggregating to 1.5cm. Microscopy revealed small cystic spaces lined by malignant cells along with bony tissue, areas of necrosis and haemorrhage and few mitotic figures. Immuno Histo Chemistry (IHC): Ki-67, PanCK, P63, P40 were Positive.

RESULT:

After confirmation of IHC reports features were suggestive of Metastatic Squamous cell carcinoma.

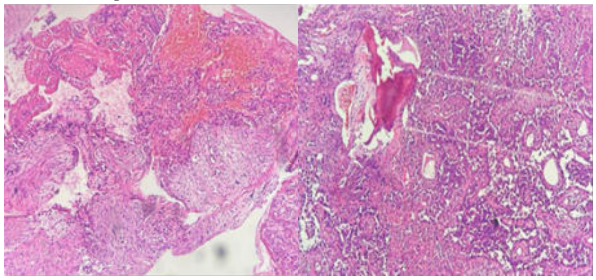
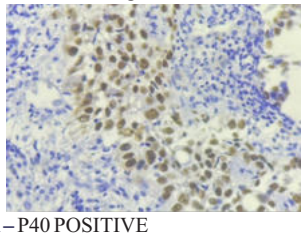
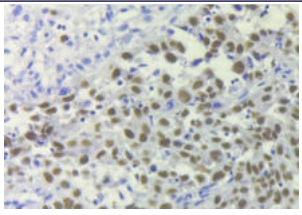


Figure 1 and 2 show squamous cells lining cystic spaces along with necrosis and areas of haemorrhages.



IHC MARKER – P40 POSITIVE



IHC MARKER – P63 POSITIVE

DISCUSSION-

Spinal metastases pose a significant challenge in oncology, impacting up to 70% of cancer patients. Among these, approximately 20% develop symptoms such as pain, neurological deficits, and a decline in health-related quality of life. Multiple non-infectious conditions share clinical and radiological characteristics with spinal tuberculosis, potentially leading to misdiagnosis in the absence of microbiological or histopathological confirmation.

The earliest sites of direct invasion in oral squamous cell carcinoma (SCC) are the loco-regional lymph nodes. Hematogenous dissemination can lead to distant metastases, with the lungs being the most frequently affected (70%), followed by the liver (42%) and bones (15%). However, vertebral involvement is exceedingly rare, occurring in less than 1% of cases (3).

The extent of neurological function at the onset of treatment plays a critical role in determining recovery in acute spinal cord compression due to metastasis. Timely diagnosis is essential to maximize the chances of preserving neurological function (3).

CONCLUSION:

Metastasis of tongue squamous cell carcinoma (SCC) to the spine is a rare occurrence. Recognizing spinal symptoms early is crucial, as timely diagnosis can significantly improve neurological outcomes. IHC markers play crucial role in distinguishing the primary lesion from Mets and proper retrograde history is mandatory. Microbiology testing further aids to rule out tuberculous infection.

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