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Case Report

Patient of carcinoma cervix presenting with oculomotor palsy due to meningeal carcinomatosis- a case report

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ABSTRACT

We report a case of isolated pupil involving oculomotor nerve palsy as the inaugural and the only clinical sign of meningeal carcinomatosis (MC) in a patient of carcinoma of cervix. There were no other neurological signs and symptoms except for headache. The first MRI was unremarkable but a repeat MRI after 15 days showed meningeal enhancement which pointed towards the diagnosis. The CSF was also normal. This case highlights the importance of considering MC in all patients who develop sudden ptosis due to oculomotor palsy in a cancer patient even if MRI is normal.

Keywords: Meningeal carcinomatosis, Oculomotor nerve palsy, Cervical carcinoma

INTRODUCTION

Meningeal carcinomatosis (MC) is defined as a malignant infiltration of the leptomeninges and subarachnoid space and can be a devastating complication of systemic malignancy. Here, we report a unique case of MC in a case of cervical cancer who presented with ptosis due to a third nerve palsy.[1,2]

CASE REPORT

A 62 year old female patient of cervical cancer presented with ptosis of the right eye. The onset was sudden and was accompanied by headache. Examination revealed pupil involving right sided oculomotor nerve palsy. There was no other neurological abnormality.

MRI brain revealed hyperintensities in the globus pallidus which were not indicative of the diagnosis. Physical examination and laboratory tests were normal. Six months back the patient had developed pain in the abdomen and on investigation found to have squamose cell carcinoma with metastasis in liver for which the patient received chemotherapy. Ten days after the development of ptosis patient developed altered sensorium.

A repeat MRI reported the diagnosis as meningo encephalitis. Keeping in view the primary diagnosis of Ca cervix with no evidence of infective meningitis a diagnosis of MC was made although the CSF did not reveal any malignant cells. The patient did not show improvement with supportive treatment and died after a few days.

DISCUSSION

Meningeal carcinomatosis occurs in 3–8% of cancer patients. It is most commonly seen in patients with leukaemia, lymphoma, breast, lung and gastrointestinal malignancies. MC from gynecologic malignancies especially cervical cancer is extremely rare. It may be caused by hematogenous spread, meningeal seeding from brain metastasis, or direct extension from sites outside.

The presentations include cerebral (38%), cranial nerve (45%), spinal nerves (48%) as well as limb weakness (38%). Patient can have features of increased intracranial tension such as headache, nausea, and vomiting. The symptoms related to infiltration of cranial nerves such as loss of vision and hearing loss have been reported.[1] An isolated third nerve palsy in MC has also rarely been described.[2-4]

To our knowledge, there is no previously reported case of isolated oculomotor nerve palsy in a patient of cervical cancer. In patients with MC, MRI with gadolinium usually demonstrates meningeal enhancement or hydrocephalus.

However, this report brings out the fact that the initial MRI of the brain may appear completely normal or with nonspecific abnormalities. The first negative report was misleading. It was only the second report showing meningeal enhancement which led to the diagnosis since there was no evidence of infective meningitis.

In our patient CSF was not positive for malignant cells. It has been reported that the initial cytologic examination is only diagnostic in approximately 50% of cases but increases with serial CSF examinations; several lumbar punctures may be required to establish the diagnosis.[5] There can be persistently negative cytology in 10% of patients.

Cytologic findings are more likely to be positive in patients with extensive lepto-meningeal involvement because CSF obtained from a site distant to the pathology is more likely to yield negative pathology. Other causes of false negatives can include withdrawing less than 10.5 mL CSF, delayed processing of samples, and obtaining only 1 sample. CSF pleocytosis and modest protein elevations are consistent with but not indicative of the diagnosis.

CONCLUSION

This case highlights the importance of considering MC in all patients of known malignancy who develop sudden pupil involving oculomotor palsy even with normal MRI and CSF report so that appropriate treatment can be instituted early.

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