

Nuclear third nerve palsy as a presenting manifestation of breast carcinoma

A 55-year-old lady, who was a known case of rheumatoid arthritis since 2010, presented with acute-onset, painless, progressive bilateral drooping of eyelids, with their complete closure within 7 days of symptom onset. She denied any history of retro-orbital pain, diplopia, redness, proptosis, or abnormal sweating over the face. Examination revealed bilateral complete ptosis with restricted vertical gaze (upgaze > downgaze) and left medial rectus palsy [Figure 1]. In view of bilateral ptosis with upgaze palsy, the possibility of nuclear third nerve palsy was considered with a lesion in the mid brain. Clinically, the etiological possibility of rheumatoid vasculitis versus a midbrain infarct or a mass lesion was suspected. On general physical examination, she was found to have a hard lump in the left breast with axillary lymphadenopathy.



Figure 1: Extraocular movements and bilateral complete ptosis

Magnetic resonance imaging (MRI) of the brain [Figure 2a-f] showed a contrast-enhancing lesion in the midbrain extending upto the tectum involving the third nerve nucleus. Metastasis to liver and lung was noted on computed tomography [Figure 2g and h]. Histopathological examination of the breast tissue [Figure 2i] revealed infiltrative ductal carcinoma. The patient was started on steroids, and subsequently, on chemoradiotherapy.

Nuclear third nerve palsy can result from ischemia, infective causes, or tumors. Metastatic involvement of the third nerve nucleus has been reported with carcinoma of the lung, skin, or breast. Breast carcinoma presenting as bilateral ptosis due to midbrain metastasis has been very rarely reported in the literature.^[1] The topographic arrangement of oculomotor subnuclei within the midbrain is responsible for the varying clinical presentations in nuclear, fascicular, or infranuclear lesions.^[2]

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Biplab Das, Vinny Wilson, Sahil Mehta, Balan Gaspar¹, Vivek Lal

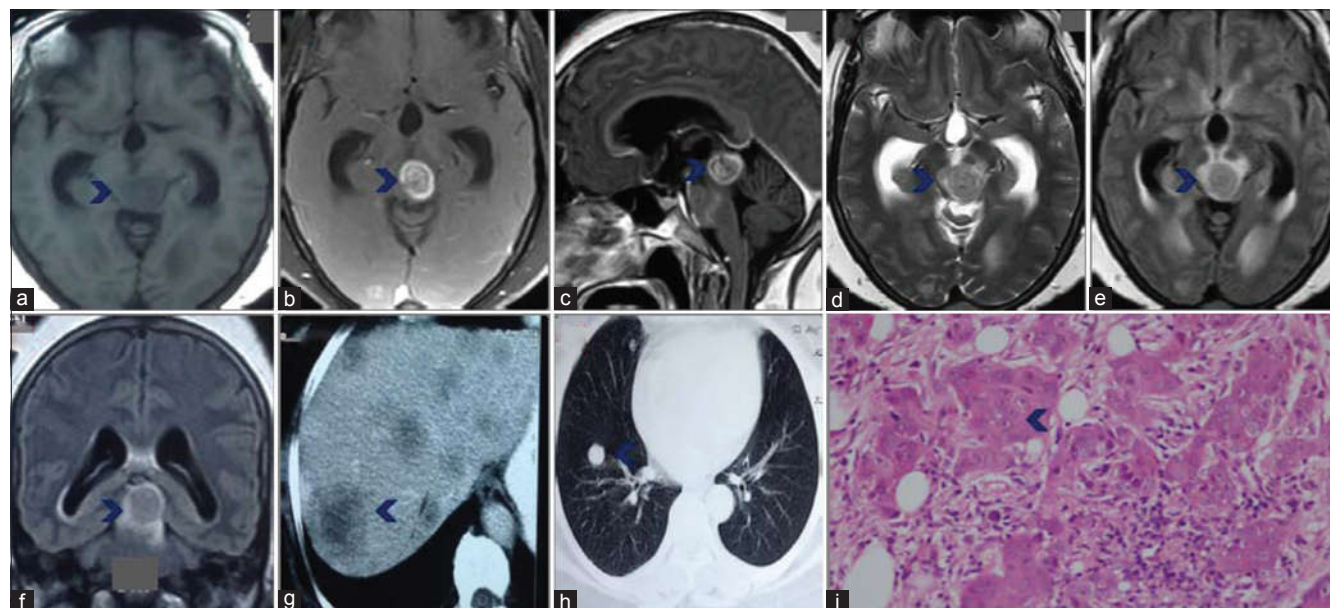


Figure 2: Contrast-enhancing magnetic resonance imaging of the brain (panel a-f) showing contrast enhancing T1, T2, and fluid-attenuated inversion recovery hypointense lesion involving the third nerve nucleus in the midbrain. Computed tomography (panel g and h) showed metastasis in the liver and lung. Breast tissue histopathological examination (panel i) revealed tumor cells arranged in the form of nests and cords with marked pleomorphism, brisk mitosis, and necrosis