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Photo Clinic

Cranial Nerve Lymphomatosis Magnetic Resonance Imaging Findings in a Case of Mantle Cell Lymphoma

Dear Editor,

Neurolymphomatosis (NL) is a rare condition of lymphomatous infiltration of peripheral nervous system, usually by B-cell non-Hodgkin lymphoma (NHL).[1,2] The symptoms are classified in four patterns, such as painful involvement of nerves or roots, cranial neuropathy with or without pain, painless involvement of peripheral nerves, and painful or painless involvement of a single peripheral nerve at the presentation.[2] Differential diagnosis of NL includes leptomeningeal lymphomatosis, nerve damage by herpes zoster or enlarged lymph nodes, chemotherapy or radiation plexopathy, and lymphoma associated vasculitis and paraneoplastic syndromes.[1] Even in cases with neurophysiolgic evidence of nerve involvement, nerve biopsy may not demonstrate lymphomatous infiltration because of its irregular involvement. Therefore, postmortem pathologic studies can only reveal the diagnosis.[3]

A 65-year-old man with mantle cell lymphoma (MCL) was examined by the cranial magnetic resonance imaging (MRI). The main complaints were pain in both ears, diplopia, and restriction of inward movement of the left eye after the CHOP (Cyclophosphamide, Hydroxydaunorubicin, Oncovin, and Prednisone) treatment. The cranial MRI revealed diffuse thickening of the cisternal and cavernous segments of bilateral oculomotor nerves and the cisternal and canalicular segments of bilateral facial and vestibulocochlear nerves. Also, cranial MRI demonstrated the infiltration of the hypophyseal infundibular stalk. All lesions showed contrast enhancement following intravenous administration of paramagnetic contrast media on MRI (figures 1 and 2). There was no other pathological signal on the cranial MRI. According to the clinical symptoms and existing MR findings, the case was accepted as lymphomatous involvement of cranial nerves in the MCL. A signed consent form was obtained from the patient.

MCL accounts for 5-10% of non-Hodgkin lymphomas that is derived from mature B cells and more frequently seen in elderly males. Bone marrow, Waldeyer's ring, and gastrointestinal tract are more affected by the extranodal involvement of MCL. Although the involvement of the central nervous system (CNS) in MCL is reported to range from 4% to 26%, NL occurs in a minority range of 3%.[4,5] Cranial MRI is often a preferred diagnostic modality and can be decisive in the differentiation of NL and involvement of CNS.

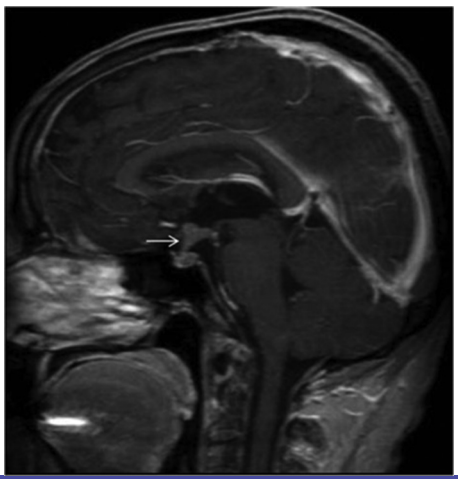

Figure 1: Sagittal contrast-enhanced T1-weighted MR image shows the infiltration and enlargement of the hypophyseal infundibular stalk (arrow).

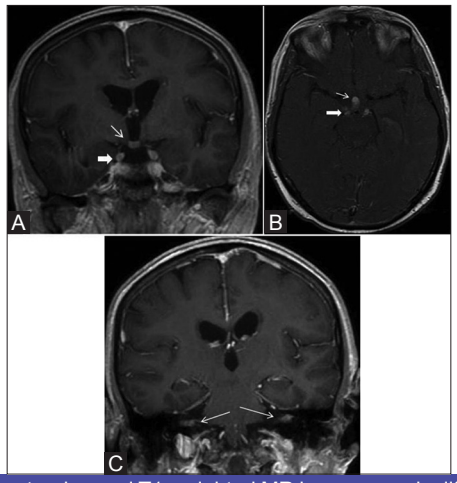

Figure 2: Coronal (A) and Axial (B) contrast-enhanced T1-weighted MR image reveals diffuse enhancement and thickening of the cisternal segments of bilateral oculomotor nerves (thick arrow) and infiltration of the hypophyseal infundibular stalk (thin arrow). Coronal (C) contrast-enhanced T1-weighted MR image demonstrates diffuse enhancement and thickening of the bilateral facial and vestibulocochlear nerves (arrow).

Conflict of Interest: None declared.

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