case report

Anaplastic large cell lymphoma presenting as a cerebellar mass

N Geetha [a,*], KP Sreelesh [a,1], Rekha Nair [b,2], Anitha Mathews [b,3]

[a] Department of Medical Oncology, Regional Cancer Centre, Trivandrum 695011, Kerala, India, [b] Department of Pathology, Regional Cancer Centre, Trivandrum 695011, India

[*] Corresponding author. Tel.: +91 9447500920. · geenarayanan@yahoo.com (N. Geetha) · sreelukp@gmail.com (K.P. Sreelesh) · drrekhanair@gmail.com (R. Nair) · anithamfrancis@gmail.com (A. Mathews) · Received for publication 24 February 2014 · Accepted for publication 21 June 2014

[1] Tel.: +91 9400402129.
[2] Tel.: +91 9447344430.
[3] Tel.: +91 9847919270.
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Anaplastic large cell lymphoma (ALCL) is a T cell lymphoma occurring commonly in childhood and rarely in adults. Central nervous system involvement in ALCL is very rare and cerebellar involvement at presentation has never been described. We examine the case of a young adult who presented with a cerebellar mass. A 19-year-old boy presented with signs of raised intracranial tension, which, on imaging, revealed a right cerebellar mass. He underwent suboccipital craniotomy and partial excision of the tumor. However, the histopathology was inconclusive. He subsequently presented with cerebellar signs and repeat imaging showed recurrence of the cerebellar lesion. He underwent decompression and ventriculoperitoneal (VP) shunting. Histopathology was suggestive of ALK (anaplastic lymphoma kinase) positive anaplastic large cell lymphoma. The patient was started on chemotherapy. However, his neurological status deteriorated, his condition worsened, and he expired a month later.

KEYWORDS: ALCL; Cerebellum; Brain; NHL

INTRODUCTION

Anaplastic large cell lymphoma (ALCL) is a T cell lymphoma accounting for 2–8% of all non-Hodgkin's lymphoma and 20–30% of childhood lymphomas.[1] Although ALCL is primarily a nodal disease, extranodal involvement is not uncommon and usually involves skin, bone, soft tissue, lung, and liver. Central nervous system involvement in ALCL is very rare and cerebellar involvement at presentation has never been described before. We examine the case of a young adult who presented with a cerebellar mass.

CASE REPORT

A 19-year-old boy was evaluated in a neurosurgery center for headache and vomiting. A computerized tomogram (CT) scan of his brain showed a focal, mildly enhancing hypodense lesion measuring 2–1 × 1.3 × 1.5 cm in the right cerebellar hemisphere close to the midline abutting the falx cerebellum (Figs. 1A & B). Magnetic resonance Imaging (MRI) showed a 2.9 × 2.2 cm well-defined right cerebellar lesion, hypointense on T1 and hyperintense on T2 weighted images showing contrast enhancement below the tentorium with obstructive hydrocephalus (Figs. 2A–E). He underwent suboccipital craniotomy and partial excision of the tumor. The histopathology did not reveal any neoplastic tissue and the patient was kept on follow-up. He was apparently asymptomatic for about nine months after which he developed repeated episodes of bifrontal headache associated with vomiting. He had unsteadiness of gait which gradually increased, and he was unable to walk. There was no history of loss of consciousness, seizures, visual disturbances, weakness of limbs, bladder or bowel disturbance. He gave history of diminished vision in right eye since early childhood. On examination, he was conscious with normal higher mental

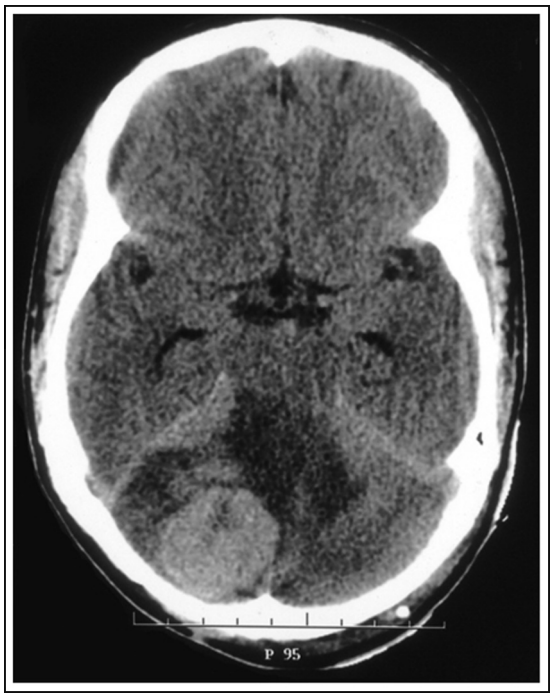

Figure 1A. CT brain plain axial image showing hyperdense lesion in the right cerebellum with surrounding edema.

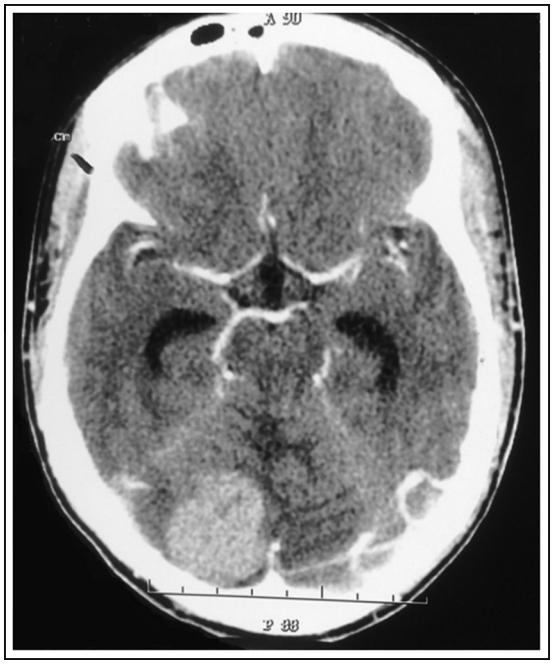

Figure 1B. CT Brain post contrast axial view showing the lesion in right cerebellar hemisphere.

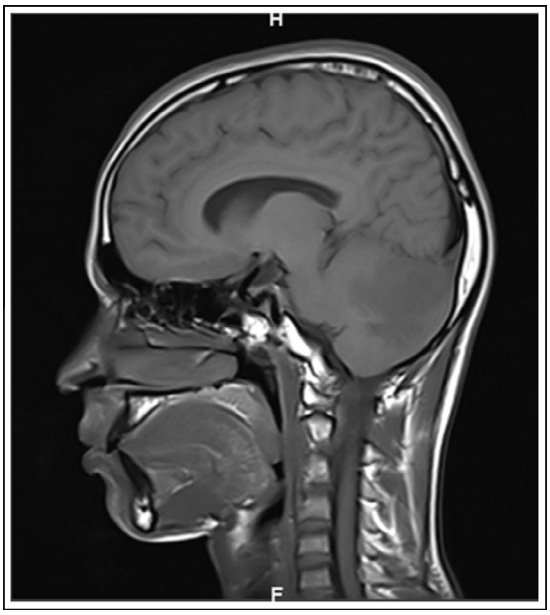

Figure 2A. MRI T1 sagittal view showing hypo intense lesion with surrounding edema in the cerebellum.

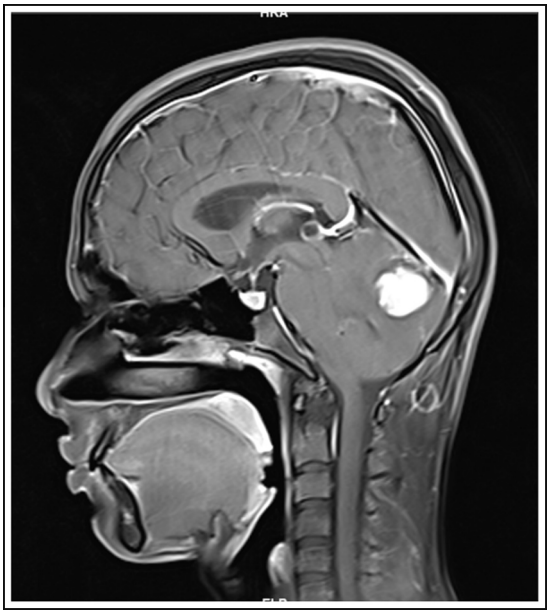

Figure 2B. MRI T1 post contrast sagittal view shows the same lesion with intense contrast enhancement.

functions. Pupils were equal and reactive, and extra-ocular movements were normal. Visual acuity was less on the right side. Nystagmus was present on the right side, and finger nose test was impaired on both sides. Fundi showed early papilledema. No other cranial nerve defects were present. Motor power was grade 4+ in all four limbs. CT brain showed recurrence of the right cerebellar lesion with surrounding edema and obstructive hydrocephalus. He underwent decompression and ventriculoperitoneal (VP) shunting. Post-operatively, the patient's condition deteriorated; he was ventilated, and he developed meningitis, which was managed with antibiotics.