

chyma tumoral infiltrates, visible with spectroscopy. An important pitfall in the diagnosis arises when differentiating leptomeningeal tumoral infiltration from signal changes due to intrathecal chemotherapy. As with the effects of lumbar puncture, the latter is characterized by signal enhancement of sulci and basal cisterns during FLAIR. Regarding chemotherapy-related abnormalities, the following were encountered: vascular thromboses, acute Methotrexate-induced neurotoxicity, posterior reversible encephalopathy syndrome and brain atrophy.

CONCLUSION

A wide spectrum of brain abnormalities can be present at diagnosis or for the duration of treatment for leukemia. Their evolution is variable, and even though some of them are reversible others are at risk of definitive sequelae, thus the radiologist must be familiar with them in order to recognize them promptly.

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MRI FINDINGS IN A PEDIATRIC PATIENT AFFECTED BY WERNICKE'S ENCEPHALOPATHY

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PURPOSE

Wernicke's encephalopathy caused by thiamine (vitamin B1) deficiency can be fatal if untreated. Post-mortem studies indicate that Wernicke's encephalopathy is underdiagnosed in the pediatric population. The aim of our study is to describe pertinent MRI findings, through an unusual case of Wernicke's encephalopathy, which should raise the clinical concern for this diagnosis in the pediatric age group.

METHODS

Multiplanar and multiecho MRI imaging of the brain was performed emphasizing the relative T1, T2* and diffusion weighted signal characteristics using a 1.5T MRI scanner. Clinical evaluation of the patient and relevant history from the family was obtained.

RESULTS

A ten year old male with a history of acute lymphoblastic leukemia presented with nonspecific mental status changes and cognitive decline. Symmetric high signal intensity alterations in the mamillary bodies, medial thalami, tectum of the midbrain, peri-aqueductal gray matter, medial vestibular nuclei, prepositus hypoglossal nuclei, substantia nigra, dentate nuclei, frontal cortex and cingulum cortex were noted on MR imaging. These findings raised the suspicion of Wernicke's encephalopathy which was confirmed on further clinical evaluation.

CONCLUSION

MR imaging is crucial in the diagnosis of Wernicke's encephalopathy, as the diagnosis in this case was not suspected prior to imaging. As demonstrated by our case report, atypical imaging features of Wernicke's encephalopathy seen in the adult nonalcoholic population can also be present in the pediatric age group; these findings include symmetric high signal intensity in the periaqueductal gray matter, mamillary bodies and medial thalamus.

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SPINAL CORD EMERGENCIES: CLINICAL PRESENTATIONS AND WORK-UP OF ACUTE MYELOPATHIES IN CHILDHOOD

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INTRODUCTION

Acute myelopathies are rare in childhood, but are associated with substantial risk of long-term neurological deficits. Based on five cases we discuss clinical presentation, differential diagnosis, management issues, and outcome of acute myelopathies in childhood.

CASE REPORT

All five children were previously healthy and presented with non-traumatic acute paresis and sensory loss of the lower limbs. Patient 1 is a 12 year old girl presenting with subfebrile temperature and sore throat, severe back pain, progressive paresis of the legs, sensory deficits with a sensory level, and urinary retention. Investigations showed EBV-myelitis. Patient 2 is an 11 year old boy with lower back pain radiating to the legs, followed by sudden paraparesis and bladder dysfunction. MRI showed spinal cavernoma with acute bleeding. Steroid treatment was initiated, surgical removal led to full recovery. Patient 3 is a 10 year old boy with sudden onset of paraesthesia in the thighs and a rapidly progressive paresis of the legs. He developed complete paraplegia and sensory dysfunction in the lower limbs. Spinal MRI showed T2-hyperintensity and contrast enhancement, probably due to spinal ischemia. He remained paraplegic and has neurogenic bladder and bowel dysfunction. Patient 4 is a 5 year old girl with paraparesis and pain in both legs after falling from her bike. MRI showed symmetric contrast enhancement in the anterior horns of the thoracolumbar myelon. Symptoms improved, etiology remained unclear. Patient 5 is a 13 year old girl with sudden onset of back pain, followed by paraesthesia and paraparesis, probably due to spinal ischemia, incomplete recovery followed.

CONCLUSION

In acute myelopathy spinal MRI is urgent to rule out spinal cord compression and to look for inflammation or ischemia, and represents the first and most important diagnostic procedure. In most cases, history and clinical examination allow differentiation from Guillain-Barré syndrome or spinal tumor.

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INTRAVENTRICULAR GLIOBLASTOMA MULTIFORME: A PEDIATRIC CASE REPORT

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