Case Report
A Rare Presentation of Neurocysticercosis in a Young Child

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Summary
Neurocysticercosis is the most common parasitic infestation of the central nervous system which manifests commonly as acute onset focal seizures. We report a rare clinical presentation of neurocysticercosis in a 1-year-old infant who presented with involuntary movements. Involuntary movements are not a common manifestation. Young children are rarely affected by this disease. In endemic areas, when a child presents with seizures or unusual neurological features and the CT scan shows contrast enhancing lesions or cystic lesions neurocysticercosis should be considered however young the child may be.

Introduction
Neurocysticercosis is the most common parasitic infestation of the central nervous system which manifests commonly with epilepsy but can also cause signs of increased intracranial pressure, meningitis, behavioral disorders, paresis and hydrocephalus. There are a few uncommon neurological presentations, such as dystonia, dorsal midbrain syndrome, cerebral hemorrhage, 3rd ventricular cyst and paraplegia due to intramedullary cyst. Cases are rarely seen in very young children. We report a rare clinical presentation of neurocysticercosis in a 1-year-old infant.

Case report
A previously healthy, 1-year-old boy from a rural area presented to us with fever, inability to stand and tremors involving tongue, left upper and lower limbs for 4 days. When seen in casualty, the child was conscious but was not able to stand or walk with support. On examination, he had a head circumference of 44 cm. Anterior fontanelle was at level and fundus examination was within normal limits. There were tremors involving left upper and lower limbs at rest. There was no focal neurological deficit. Lumbar puncture was traumatic. CSF analysis revealed WBC 70 cells/cm² (90 per cent lymphocytes) with 1250 RBCs, a protein level of 41 mg/dl and a glucose level of 67 mg/dl. He was started on antibiotics and admitted in the ward. After admission in ward child developed left sided focal seizures. CT scan of brain revealed ring-enhancing lesions consistent with neurocysticercosis both in cortical, subcortical regions and also in the basal ganglia (Fig. 1 a&b). Serum neurocysticercal antibody was positive. He was started on albendazole under steroid cover. His abnormal movement improved gradually. At discharge there were no abnormal movements and he was seizure free. At follow up, 3 months later, he was well.

Discussion
Neurocysticercosis in young children is considered to be a rare entity. Possible causes of that would be the child’s nutritional habits and their unusual environmental exposure to the Taenia solium eggs and the longer incubation period. Children younger than 5 years of age, represented only 2–3 per cent of all cases in a large literature series reported by Geme, et al. but neurocysticercosis has been reported in children as young as 7 months of age. When it does occur, in children less than 3 years it tends to be multiple like in our child. The term used to describe them is miliary cysticercosis, the pathophysiology of which may be related to immature immune system.

The most common presentation in children is acute onset focal seizures. This has been confirmed by a study done by Vazquez and Sotelo, where approximately 80 per cent of children diagnosed as neurocysticercosis presented with seizures, which were mostly focal in nature. Other common presentations are with signs of raised intracranial tension, which includes headache, vomiting, and papilloedema. Less common presentation include hemiparesis, visual changes, cauda equina involvement, sensory disturbances, pituitary apoplexy,
meningitis, psychiatric disturbances, dorsal midbrain syndrome, hemorrhagic stroke and paraplegia.

The only case of neurocysticercosis with involuntary movements over the last two decades has been reported in a 15-year-old girl who presented with involuntary movements involving the left side of the body in 1982. The CT scan of her brain revealed numerous cysts in the right basal ganglia. The CT scan in our patient also revealed multiple ring enhancing lesions with moderate surrounding edema in cortical, subcortical and basal ganglia suggestive of neurocysticercosis. There have been no previous case reports of neurocysticercosis presenting with involuntary movements in a very young child like ours.

In conclusion in endemic areas, when a child presents with seizures or unusual neurological features and the CT scan shows contrast enhancing lesions or cystic lesions neurocysticercosis should be considered however young the child may be.

References