Neurocysticercosis and Secondary Headache

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Abstract
Headache is the commonest symptom in Neuro infections. Neurocysticercosis is the commonest cause of Neuro parasitic infections. Myocysticercosis is rarely reported. Here, we are presenting a case of secondary headache due to Neuromyocysticercosis.

Keywords: Secondary Headache; Infections; Neuromyocysticercosis

Introduction
Headache is the commonest symptom in Neuro infections. Neurocysticercosis is the commonest cause of Neuro parasitic infections.

Case Summary
57 years old female presented with holocranial headache for the past one and a half years with more symptomatic for the past one month. No history suggestive of primary headache. She gave history of pork meat ingestion. No history of contact with tuberculosis. No other history suggestive of secondary headache. On examination, she didn't have any neurological deficit. She gave history of thigh pain. Routine lab investigations were normal. On Magnetic resonance imaging (MRI) of Brain, she had multiple tiny ring enhancing lesions noted along gray matter-white matter junction in bilateral frontal, parietal, right temporal, splenium of corpus callosum, possibility of Neurocysticercosis. X-Ray of both thighs showed multiple calcified cysticercous lesions in thigh muscles. Hence we are naming it as, Neuromyocysticercosis.

Figure 1: Neurocysticercosis computed tomography (CT) brain imaging.

Discussion

Headaches can occur as a result of many conditions, according to the cause headache is divided into primary and secondary headache. Primary headache includes migraine, tension type headache and autonomic headache. Secondary headache includes headache due to infections, head injury, vascular disorders, and brain tumors.

Brain infections include bacterial, viral, tuberculous, parasitic, fungal and HIV infections. Common central nervous system (CNS) infections causing granuloma include central nervous system (CNS) tuberculosis and Neurocysticercosis.

Cysticercus is a scientific name given to the young tapeworms belonging to the genus Taenia. It is a small, sac-like vesicle resembling a bladder; hence it is also known as bladder worm. It is filled with fluid, in which the main body of the larva, called scolex resides. It normally develops from eggs, which are ingested by the intermediate hosts, such as pigs and cattle. The tissue infection is called cysticercosis.

Cysticercosis is usually acquired by eating food or drinking water contaminated by tapeworm eggs from human feces. Among foods, uncooked vegetables are the major source. The tapeworm eggs are present in the feces of a person infected with the adult worms, a condition known as taeniasis. Taeniasis, in the strict sense, is a different disease and is due to eating cysts in poorly cooked pork. People who live with someone with the pork tapeworm have a greater risk of getting cysticercosis. The diagnosis can be made by aspiration of a cyst. Taking pictures of the brain with computer tomography or magnetic resonance imaging is useful for the diagnosis of disease in the brain.

Neurocysticercosis occurs when cysts formed by the infection take hold within the brain, causing neurologic syndromes such as epileptic seizures. It is a common cause of seizures worldwide. It has been called a “hidden epidemic” and “arguably the most common parasitic disease of the human nervous system”.

Clinical manifestations of neurocysticercosis vary with the locations of the lesions, the number of parasites and the host’s immune response. Many patients are asymptomatic. Possible symptomatic presentations include epilepsy, headache, dizziness, stroke, neuropsychiatric dysfunction. Onset of most symptoms is usually subacute to chronic, but seizures present acutely.

Headache may be associated with intracranial hypertension and are indicative of hydrocephalus; they may also result from meningitis. Chronic headache may be associated with nausea and vomiting. Neurocysticercosis mediated inflammation of brain parenchyma activates trigeminal vascular system manifests as headache [4].

Cysticercosis infection has been reported in central nervous system, orbital muscles, temporalis, masseter muscles, and subcutaneous fascia. Myocysticercosis occurs when the infection occurs in the skeletal muscles. Neuromyocysticercosis is defined as cysticercosis infection involving nervous system and muscles [1].

This patient presented with Cysticercous lesions in the brain and skeletal muscles of thigh, as evidenced by CT Brain imaging and MRI Brain imaging. X-Ray of both thighs showed calcified cysticercous lesions. Patient was treated with oral albendazole and prednisolone, patient symptoms improved well and patient got discharged [2,3].

Conclusion
Neuromyocysticercosis can present as a chronic secondary headache. Early diagnosis and management gives good clinical outcome. This case is presented for neuromyocysticercosis with secondary headache with good clinical recovery.

Bibliography

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