

## Cervical Spinal Cord Neurocysticercosis: Case Report

Vithor Ely Bortolin da Silva\*

Department of Neurosurgery, Heliópolis Hospital, São Paulo, Brazil

Female patient, 53 years old, from Bahia, with complaint of loss of strength in the left leg for 1 month. Patient reported monoparesis in the lower left limb, which for 15 days also evolved to the right lower limb and one week to the right upper limb. Concomitantly, he presented right occipital headache of medium intensity. Magnetic resonance imaging reveals three intradural, extramedullary, circular, well delimited lesions in the cervical segment of the spinal cord with peripheral uptake by contrast. Patient was submitted to treatment with albendazole and dexamethasone receiving discharge with improvement of headache and maintaining neurological status. Spinal cord involvement occurs in 1% of cases and is usually associated with subarachnoid neurocysticercosis, which causes an inflammatory process with root demyelination, generating root pain and neurological deficits that will depend on the location of the lesion. In the case reported, we present a patient with a history of “around the clock” paresis, a description that refers to the compression at the foramen magnum and upper cervical spine. After the nuclear resonance, a very suggestive cystic lesion is identified, which together with the clinical criteria allowed the diagnosis. Although the best way to treat the spinal cord presentation of neurocysticercosis is still uncertain, albendazole combined with dexamethasone seems to be the best option. Dexamethasone works by decreasing the local inflammatory reaction and may increase blood levels of albendazole. Although only 60% to 75% of patients in the surgical group had satisfactory results, almost all clinically treated patients report a good medical outcome. Then, with the advent of better neuroimaging techniques and characterization of neurocysticercosis, most patients are diagnosed early and treated medically, thus avoiding the need for surgery in many patients. Neurocysticercosis is a parasitic infection in the central nervous system caused by the larval stage (cysticercus) of pig platelminth *Taenia solium*. It is an endemic disease worldwide with about 50 million cases, causing about 50,000 annual deaths reported by the world health organization. In Latin America this infection affects about 350,000 people, and in Brazil the literature showed an incidence of 1.5% in autopsies and 3% in clinical studies. The clinical presentation presented by the patient is varied and may be asymptomatic until death, and will depend on the infection

characteristics such as location, number of cysts and intensity of the host immune response. Generally, the major determinant of clinical manifestation is the location of the affected central nervous system. The most commonly observed symptom is seizure (80%) and reflects the presence of cyst in the brain parenchyma. Other manifestations are focal deficit (16%), increased intracranial pressure (12%) and cognitive decline (5%). The neurocysticercosis cyst may be parenchymal or extra parenchymal. The parenchymal form is the most commonly observed and presents in more than 60% of patients. The extra parenchymal form is less common, more difficult and treat, leading to a worse prognosis. It may present in the intra-ventricular or subarachnoid space. In the intraventricular space the cyst is free in the ventricular cavity or adhered to the choroid plexus, symptoms appear when it interrupts the cerebrospinal fluid flow and causes increased intracranial pressure. The cysticercus that develops in the subarachnoid space causes an inflammatory process that leads to chronic arachnoiditis, manifesting with convulsions, meningitis or causing mass effect. Spinal cord involvement occurs in 1% of cases and is usually associated with the presentation of subarachnoid neurocysticercosis, which causes an inflammatory process with root demyelination, causing root pain and neurological deficits that will depend on the location of the lesion. In the case reported here, we present a patient with a history of paresis “around the clock” with involvement following the clockwise direction, a description that refers to compressions at the foramen magnum level and upper cervical spine. After nuclear resonance, a very suggestive cystic lesion can be identified, which together with the clinical criteria allowed the diagnosis. Although the best way to treat the spinal cord presentation of neurocysticercosis is still uncertain, albendazole combined with dexamethasone seems to be the best option. Dexamethasone works by decreasing the local inflammatory reaction and increase albendazole blood levels. Although only 60% to 75% of patients in the surgical group had satisfactory results, almost all clinically treated patients reported a good medical result. Thus, with the advent of better neuroimaging techniques and better characterization of neurocysticercosis, most patients are diagnosed early and treated medically, avoiding the need for surgery in many.

**\*Corresponding author:** Vithor Ely Bortolin da Silva, MD, Departamento de Neurocirurgia, Hospital Heliópolis, Rua Conego Xavier, 276, 5° andar, São Paulo, SP, Brasil, Tel: 11948821213, **Email:** [vithorely@gmail.com](mailto:vithorely@gmail.com)

**Received** June 29, 2020; **Accepted** July 13, 2020; **Published** July 20, 2020

**Citation:** Silva VEB (2020) Cervical Spinal Cord Neurocysticercosis: Case Report. J Neuroinfect Dis 11: 300.

**Copyright:** © 2020 Silva VEB. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.