Sparganosis

Sparganosis is a severe parasitic disease caused by the larvae of Spirometra mansoni, also called “sparganum.” In human hosts, the Spirometra mansoni larva commonly targets the subcutaneous tissue or muscle. Sometimes it can also migrate into the brain, resulting in cerebral sparganosis, mainly characterized by focal neurological symptoms such as seizures and radiological “wandering lesions” on magnetic resonance images (MRIs). Clinical cases of cerebral sparganosis have been reported worldwide, mainly in Asian countries, but also in North America, South America and Australia. Only two cases have been previously reported in Europe [1].

Case reports

2015

A 29-year-old male from Bolivia, who lived in Spain, presented to our service for seizures and a multicystic brain lesion, initially suspected to be a dysembryoplastic neuroepithelial tumor (DNET). He underwent gross total resection of the mixed solid/cystic lesion. Pathology revealed gliosis, multiple interconnected cystic cavities with fibrous walls, inflammatory cell infiltration and no necrotizing granulomatous reaction. Inside the cavities, a parasitic form was identified as the larva of the cestode Spirometra mansoni. At 1-year follow-up, the patient had no deficits and was seizure free. Clinicians should be alerted to the possible existence of this rare entity in Europe, especially in patients from endemic areas with a possible infection history as well as “wandering lesions” on the MRI [2].

2013

A 52-year-old woman presented with lower back pain, progressive symmetrical paraparesis with sensory impairment, and sphincter disturbance. Magnetic resonance imaging (MRI) of the whole spine revealed multiple intradural extramedullary serpiginous-mass lesions in the subarachnoid space continuously from the prepontine to the anterior part of the medulla oblongata levels, C7, T2-T8, and T12 vertebral levels distally until the end of the theca sac and filling-in the right S1 neural foramen. Sparganosis was diagnosed by demonstration of the sparganum in histopathological sections of surgically resected tissues and also by the presence of serum IgG antibodies by ELISA. DNA was extracted from unstained tissue sections, and a partial fragment of mitochondrial cytochrome c oxidase subunit 1 (cox1) gene was amplified using a primer set specific for Spirometra spp. cox1. After sequencing of the PCR-amplicon and alignment of the nucleotide sequence data, the causative agent was identified as the larva of Spirometra erinaceieuropaei [3].

[1], [2]
Lo Presti A, Aguirre DT, De Andrés P, Daoud L, Fortes J, Muñiz J. Cerebral sparganosis: case report and review of the European cases. Acta Neurochir (Wien). 2015 Jun 18. [Epub ahead of print] PubMed PMID: 26085111.

[3]
Boonyasiri A, Cheunsuchon P, Srirabheebhat P, Yamasaki H, Maleewong W, Intapan PM. Sparganosis presenting as cauda equina syndrome with molecular identification of the parasite in tissue sections. Korean J Parasitol. 2013 Dec;51(6):739-42. doi: 10.3347/kjp.2013.51.6.739. Epub 2013 Dec 31. PubMed PMID: 24516282; PubMed Central PMCID: PMC3916466.