

Surgical Extraction of Cerebral Sparganosis: 2-Dimensional Operative Video

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The incidence of central nervous system infestation with sparganum, the larva of *Spirometra mansoni*, is low. The presenting symptoms usually range from seizures to focal neurological deficits resulting from worm wriggling and space-occupying granulomatous lesions.

In this video, we present the surgical extraction of cerebral sparganosis, alive and intact. Informed patient consent was obtained.

The patient is a 20-yr-old man, with a history of eating frogs, who presented with intermittent epileptic seizures for 8 yr. His seizures were medically controlled using carbamazepine and valproate. In 2015, the patient also took praziquantel for 10 d. MRI scans showed a striped and string-of-beads like enhancement pattern surrounded by edema in the left frontal lobe. During the course of his condition, the lesion shifted from a deep anterior to superficial posterior site. Cerebrospinal fluid and serum analysis were positive for anti-mansoni antibodies.

For surgery, after tailored craniotomy and dural opening, a strip electrode was placed for continuous transcranial motor evoked potential monitoring. Using neuronavigation, a tiny frontal cortical incision was made, and it was carefully dissected until the sparganum was found. The worm was slowly extracted using tumor forceps and gentle aspiration with Fukushima suction. The worm, which was still wriggling with an intact scolex and body, was sent for a pathology confirmation. The tunnel and surrounding granulomatous tissues were inspected and cleared



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of body secretions of the worm. The surgery was successfully completed, and postoperative recovery of the patient was excellent with complete resolution of epilepsy in a 6-mo follow-up.

Disclosure

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

Acknowledgment

This project was sponsored by The National Key Technology R&D Program of China (No. 2014BAI04B05).

COMMENT

Parasitic infections of the brain can often be endemic to the southern United States but most often involve neurocysticercosis. The lesions usually encountered are static, and the parasite is dead at the time of surgery. The originality of cerebral sparganosis presentation, is the fact that the worm stays alive and has the ability to move and change locations on successive magnetic resonance imaging scans. The authors emphasize that the organism is still alive at the time of surgery, and very much mobile. They recommend care pulling it out of its “burrow” as it is at risk of rupturing. We congratulate the authors on their technical results, and the originality of their case.

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