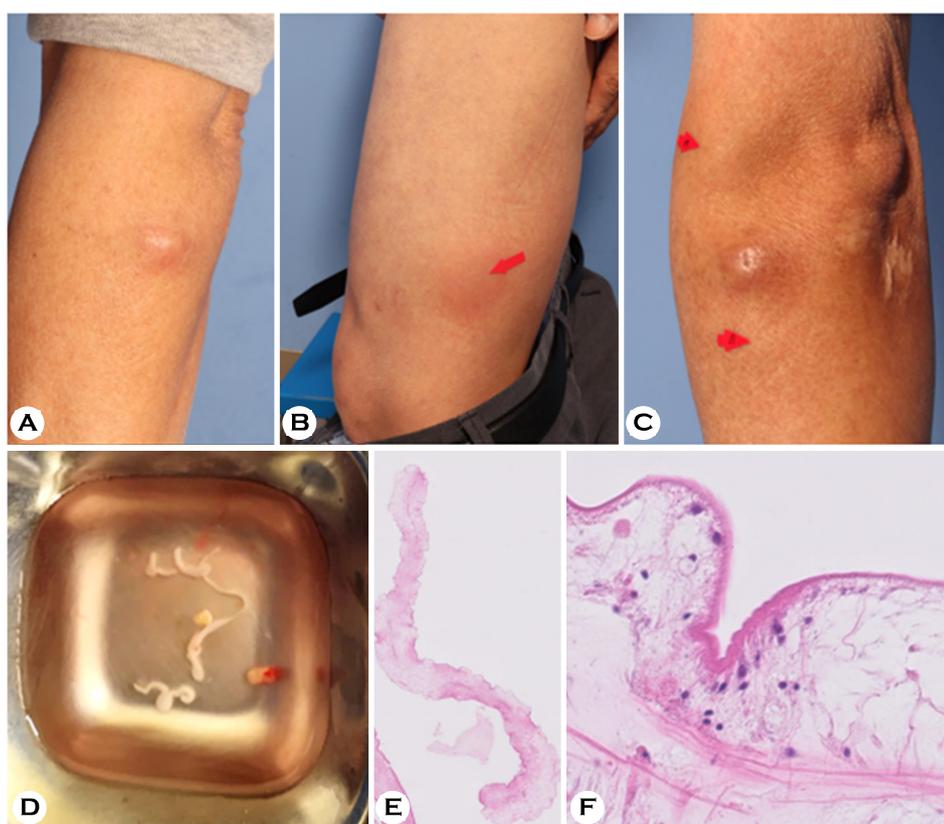


## Clinical and Histopathological Findings of Multiple Sparganosis in a Patient with Primary Myelofibrosis

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**Fig. 1.** (A) Pruritic, solitary, 1.5 cm-sized, erythematous movable subdermal nodule on the left arm (B, C) Erythematous patch on the left thigh and multiple movable nodules on the left arm two weeks after the patient first visited our clinic (D) Parasites extracted from the biopsy site showing unspecified movement in normal saline (E, F) Histopathology revealed calcareous bodies and muscle fibers identified in the worm, which was surrounded by a thick eosinophilic tegument (E: H&E, ×40; F: H&E, ×400).

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Sparganosis is caused by the plerocercoid larvae of the genus *Spirometra*. This disease commonly presents as a solitary subcutaneous or intramuscular nodule that is slow growing, typically movable and accompanied by intermittent pruritus and tenderness. The incidence of sparganosis in Korea has decreased over the last 20 years; however, cases have been consistently reported for at least the past century<sup>1</sup>.

A 64-year-old man who denied exposure to infected water and consumption of raw flesh snakes or frogs, presented to our clinic with a 7-day history of having a solitary, 1.5 cm movable subdermal nodule on his left arm causing pruritus (Fig. 1A). He was previously diagnosed with primary myelofibrosis and was treated with allogenic peripheral blood stem cell transplantation two months prior to his consultation. He was on maintenance treatment with cyclosporine resulting in immunosuppression. Routine laboratory findings were unremarkable including the absence of eosinophilia in a peripheral blood smear.

Skin biopsy removed a long white larva-like specimen with unspecified movement in normal saline (Fig. 1D). Histopathological results showed calcareous bodies and muscle fibers surrounded by eosinophilic tegument in the specimen identified as a worm (Fig. 1E and F). According to the micro-scale enzyme-linked immunosorbent assay test results, the anti-sparganum specific IgG antibody level in the serum was significantly higher than the control. Based on the clinical, histological, and laboratory findings, the patient was diagnosed with sparganosis. He was prescribed albendazole for 5 days and subsequently developed new lesions on the left arm, left leg, and both inguinal areas which were documented at the time of his 2-week follow-up visit (Fig. 1B and C). Computerized tomography detected multiple, ill-defined soft tissue masses with fat infiltration at the subcutaneous layer, and all of them were subsequently removed surgically.

Previous reports of sparganosis have verified the effects of immunosuppressive therapy to the onset of sparganosis<sup>2</sup>. Other reports have also found the absence of eosinophilia, presumably related to the immunosuppressive state of the patient. This indicates that the normal predictive value of eosinophilia on blood tests is unlikely to be present in patients with immunosuppression cases of multiple sparganosis which has been most frequently reported in immunocompromised

patients. This underscores the importance of not only suspecting a parasitic infection in immunocompromised patients with a movable mass, but also taking all necessary steps to avoid the parasite from disseminating throughout the body including close observation.

**Key Words:** Primary myelofibrosis, Sparganosis

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## CONFLICT OF INTEREST

In relation to this article, we declare that there is no conflict of interest.

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## PATIENT CONSENT STATEMENT

The patient provided written informed consent for the publication and the use of his images.

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