



Breast Sparganosis: A Rare Cause of Breast Lump

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Abstract:

Sparganosis is a zoonotic larval cestode infection, rarely found in India. Sparganosis of the breast is a quite rare parasitic infection of humans and presents as soft tissue masses that mimic breast malignancy or benign tumor. We present here a case of histologically confirmed breast sparganosis. Ultrasonography of breast showed a well-defined, hypo-echoic mass lesion above pectoral muscles, lying deep to breast tissue. MRI revealed a well-defined lesion in plane between pectoral muscle and breast. Histopathology of excised lump showed presence of larval form of *spirometra*.

Key words: Breast, Breast Neoplasms, Larva, Sparganosis, *Spirometra*.

Introduction

Sparganosis is an infection by the plerocercoid larvae of various diphylobothroid tapeworms belonging to the genus *Spirometra*. It is similar in morphology and life cycle to the fish tapeworm, *Diphylobothrium latum*. Sparganosis is reported sporadically around the world; a higher prevalence of the disease occurs in several East Asian countries. Only few cases have been reported from India.

The larval worms usually infect subcutaneous tissues growing into irregular nodules (1 to 2 cm in diameter). These nodules may persist for months or even years without any symptoms then suddenly become painful. Some patients complain of migratory nodules that come and go for many years. Sparganosis of visceral organs including the eyes, brain, urinary tract, pleura, pericardium,

and spinal canal are reported. However, breast sparganosis has been rarely reported [1-7].

Case Report

A 28 year female came to outpatient department with complaints of progressively increasing pain and lump in right breast since last six months. On examination an ill-defined, firm, irregular, 3-4 cm mass lesion was palpated deeply lying in right breast. Physical examinations revealed no other abnormalities. She had a good consciousness and nutritive condition, and routine hematological, urinal, and chemical investigations were normal. Ultrasound showed presence of hypo-echoic lesion in retro-mammary area of 1.5x1.2 cm, suggesting some collection with few reactive bilateral axillary nodes.

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MRI of breast showed a hyper-intense lesion of 13x10 mm on T2 weighted images in the pectoralis major muscle, with few reactive nodes in axilla [Fig.1 and Fig.2 showing the site of larva of sparganum in MRI breast]. A decision to excise lump to come to a diagnosis and relieve patient of persistent pain was taken. The lump with surrounding tissue was excised and sent for histopathology. It showed gross lesion of around 2.5 cm in length. Microscopy revealed a fibromuscular tissue with larval form of tapeworm *spirometra* with dense mixed inflammatory infiltration with macrophages and giant cells. Patient was discharge with advise for regular follow up.

Discussion

Sparganosis is reported sporadically around the world; a higher prevalence of the disease occurs in several Eastern and South Eastern Asian countries (China & Korea maximum cases). Most cases of human infections in these countries were mainly acquired by eating raw or insufficiently cooked meat of frogs and snakes or by placing frog or snake flesh on open wounds for skin ulcers or on eyes to treat inflammation [2,3,4]. There are reported cases of cerebral [5], ocular [6], renal [7], hepatic and subcutaneous sparganosis from different parts of India also. The lancet infectious disease journal reports that only one case of subcutaneous, one case of ocular, four cases of cerebrospinal and two cases of visceral sparganosis have been reported till now from India [8]. But a recent published case report series from Baby Memorial Hospital, Calicut shows that it is not so uncommon. They had four cases of sparganosis in five year period [9]. It seems that these cases may be misdiagnosed or under-reported.

The ultrasonographic findings of breast sparganosis may be useful for pre-operative diagnosis and patient management. The majority of breast sparganosis cases show characteristic

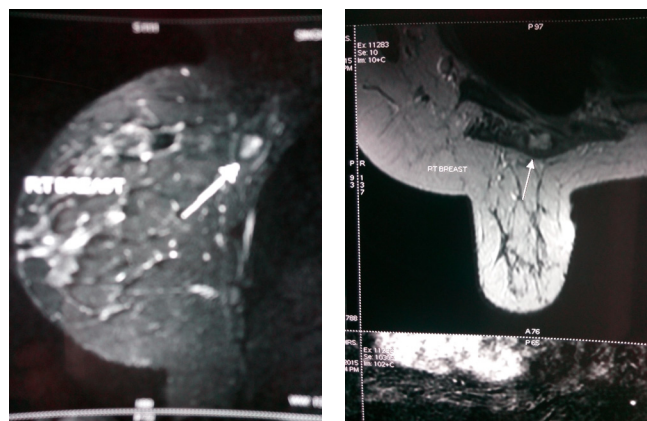


Fig.1,2: Site of larva of sparganum in MRI breast.

features on ultrasonography such as multiple elongated, tubular, hypo-echoic structures with or without internal heterogenic echogenicity. Hyper-echoic, perilesional fat is presumably produced by chronic inflammatory reactions. Color Doppler examination typically does not show vascular flow within the mass, but may have increased vascularity in patients with pain. Inspite of characteristic sonographic findings, breast sparganosis can mimic malignancy, especially in patients with previous or current malignant disease. Complete surgical removal is the treatment of choice and provides a definite diagnosis [10]. Surgery has been the treatment of choice in all these cases. Visceral larva migrans due to this parasite has high morbidity and considerable mortality.

Conclusion

Any patient diagnosed with breast sparganosis should be followed for a certain period of time, since recurrence is possible. The possibility of simultaneous involvement of other tissues, such as the abdominal wall and extremities, should also be considered. Public health strategies focusing on providing basic access to clean water may help to reduce future sparganosis infections.

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