

# Cysticercosis of Breast Presenting as A Breast Lump: Cytological Diagnosis of A Rare Case

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### Dear Sir,

Cysticercosis is a parasitic infection caused by *Cysticercus cellulosae*, the larval stage of *Taenia solium*. Rumler first described cysticercosis in 1555. [1] It came to be known in the 19<sup>th</sup> century that cysticercosis is caused by the ingestion of *Taenia solium* eggs. [2]

It is a common parasitic infection spread by feco-oral route. It may affect any organ or site in the body. The common sites of occurrence are skeletal muscle, and subcutaneous tissue. [3]

Cysticercosis of breast is a rare presentation. It is usually diagnosed incidentally, as a cord like swelling, or uncommonly as a well-defined lump. Therefore, it should be considered as a possibility in the differential diagnosis of a breast lump, especially in endemic areas.

A 45 year old married woman, presented to the FNAC clinic with the complaint of a lump in her right breast present since 5 months. The lump was non tender, mobile, firm and well defined. It measured 3X2 cm, present in the lower inner quadrant. There was no overlying skin involvement. The nipple areola complex was normal with no history of any nipple discharge. There was no fixity to chest wall. No axillary lymph nodes were palpable. A clinical diagnosis of fibroadenoma was made. Mammography had been performed that showed features of a BIRADS 2 lesion.

FNAC yielded blood mixed fluid. The smears were paucicellular showing few lymphocytes, occasional eosinophils in a blood mixed fluid background. Few variably sized fragments of *cysticercus cellulosae* were seen showing a parenchymal layer of loose fibrillary stroma with numerous small round to oval nuclei (Figure 1). Thus, a diagnosis of Cysticercosis was made.

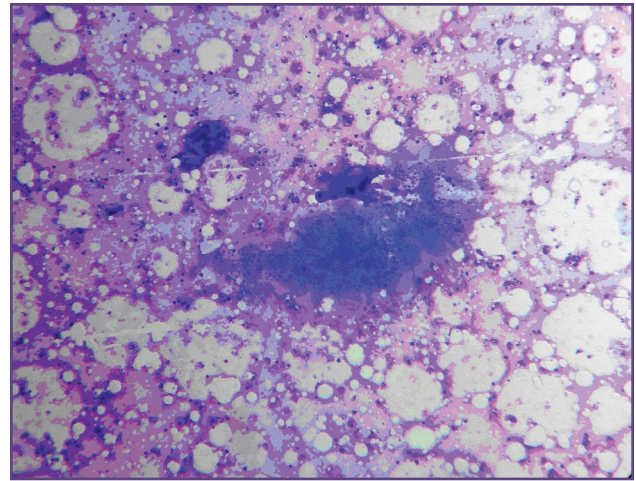


Fig. 1: FNAC smear showing a paucicellular aspirate showing *cysticercus cellulosae* fragment, against an inflammatory background. (Giemsa, 20 X).

In India, a review study of 8,364 breast aspirates over 15 years (1978-1992) in All India Institute of Medical Sciences, New Delhi, demonstrated only 8 cases of cysticercosis. [4] Thus, Cysticercosis of the breast is a rare disease presentation.

Tapeworm has two hosts, a definitive and an intermediate host. Man is the only definitive host. Pigs, dogs, cats, and sheep may act as an intermediate host, pigs being the commonest. Transmission of infection to humans can be caused by ingestion of inadequately cooked pork or due to ingestion of food or water contaminated with eggs.

Diagnosis of *cysticercus* can be made on FNAC, or biopsy. Over the past many years, FNAC has emerged as a superior, non invasive, quick procedure in diagnosing parasitic lesions like cysticercosis.

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It is important to clinically consider a diagnosis of parasitic breast lumps. Also, it hints at the possibility of clinical misdiagnoses, creating confusion with a fibroadenoma, as was seen in our case; and sometimes, even with malignancy.<sup>[5]</sup>

The presence of clear, paucicellular fluid background, few inflammatory cells including lymphocytes, and eosinophils, and histiocytes must alert the cytopathologist to search carefully for fragments of parasites. In the absence of a parasitic fragment in the first attempt, it is prudent to perform a repeat aspirate which is likely to yield parasitic fragments and establish a diagnosis on FNAC alone.

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### **Competing Interests**

None declared

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