CASE STUDY

CYSTICERCOSIS BREAST WITH RARE CYTOTOLOGICAL FINDING

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INTRODUCTION

The parasitic infections of the breast are uncommon. The majority of the cases reported are those of filariasis (Yeuhun and Qun, 1981) and cysticercosis. (Kapila and Verma, 1996) Cysticercosis presents with wide spectrum of cytomorphological patterns ranging from viable cysts, cuticle fragments, scolex, and parenchyma to necrotic and calcified lesions. The diagnostic role of FNAC in cysticercosis was first emphasized by Kung et al. in 1989. (Neelailah et al., 2010) We report a case of cysticercosis breast diagnosed on FNAC thus emphasizing that the cytological diagnosis can be quite clear cut in cases where the actual parasite structure is identified in the smears. (Adhikari et al., 2007)

Case summary

A 45 years perimenopausal (G4P4A0) female presented with swelling in the right breast in the upper outer quadrant (UOQ) since 2 months. The swelling gradually increased in size since 1 month with mild pain. There was no history of fever, jaundice, weight loss or any other complaint. Her hematological and biochemical parameters were within normal limits. On examination of right breast a firm lump measuring 4x3cms was identified in the UOQ. The lump was not freely mobile. The overlying skin was free. A clinical diagnosis of large fibroadenoma and a differential of a possible malignant lesion were kept. The Ultrasonography (USG) examination was advised and it is suggested a 3.2x2.0cm size, well defined hypoechoic lesion with debris in UOQ extending outwards from the subareolar region. An enlarged reactive lymph node was noted in the right axilla. A differential diagnosis of a supplicative inflammatory lesion was added after clinicoradiological correlation. The patient was advised fine needle aspiration (FNAC) procedure for further evaluation. FNAC was performed using a 23 gauge disposable needle attached to a 10 ml plastic syringe. Few drops of clear fluid were aspirated under aseptic conditions. The smears were prepared from the clear fluid. They were air dried and fixed in methanol and were stained with May Grunwald Giemsa (MGG) stain. The smears showed fragments of larva with folded walls. The parenchymal reticulin of thin fibrils could be seen with ovoid nuclei. The prominent finding was the presence of moderate number of refractile hooklets (Fig 1 & 2). Also seen were surrounding mild acute and chronic suppurative inflammatory lesion was added after clinico-radiological correlation. The patient was advised fine needle aspiration (FNAC) procedure for further evaluation. FNAC was performed using a 23 gauge disposable needle attached to a 10 ml plastic syringe. Few drops of clear fluid were aspirated under aseptic conditions. The smears were prepared from the clear fluid. They were air dried and fixed in methanol and were stained with May Grunwald Giemsa (MGG) stain. The smears showed fragments of larva with folded walls. The parenchymal reticulin of thin fibrils could be seen with ovoid nuclei. The prominent finding was the presence of moderate number of refractile hooklets (Fig 1 & 2). Also seen were surrounding mild acute and chronic inflammatory reaction in a proteinaceous background. No granulomas were noted. A cytomorphological diagnosis of a parasitic infection of breast was kept. Aided by radiological findings and serological confirmation, a definitive diagnosis of cysticercus cellulosae was made.

Key words:
Cysticercus, FNAC, Hooklets.
Tapeworm infection in man is caused by Taenia solium and T. saginata. Human cysticercosis is the infection caused by the larvae of pork tapeworm T. solium. The larval forms of T. saginata are not found in man. Cysticercosis is found throughout the world, although it has its greatest prevalence in Mexico, other areas of Latin America, India, China, Africa and Europe. (Neelam and Kiran, 1991) Although it can affect any organ or tissue of the body, the most common sites are the muscles and subcutaneous tissue as nodular lesions. In our presentation, the patient was clinically suggested with the differentials of a breast lump; along with a possibility of a suppurative inflammatory lesion. The cytomorphological identification of larvae in FNAC smears by different workers has widened the diagnostic utility of FNAC in skin nodules. (Vuong, 1989) Fine needle aspiration cytology (FNAC) in cysticercosis is low-cost outpatient procedure for preoperative diagnosis and may even obviate the need for open biopsy. (6) The cytological diagnosis is quite clear cut and undemanding in cases where actual parasite structure is identified in the smears as in our case study. Various diagnostic modalities employed to detect cysticercosis apart from FNAC include radiology, serology, and pathological examination. Serological tests are useful if positive but cannot rule out the disease with negative results. False positivity is expected with the past parasitic infection or cross-reactivity with other helminths. FNAC has emerged as a widely acceptable method for the diagnosis of cysticercosis. (Handa et al., 2008) In humans cysticercus have a predilection most commonly for CNS, eyes, skeletal muscles, and subcutaneous tissues. (Handa et al., 2008) Involvement of breast, as in this case, is a rare presentation.

Conflict of Interests

The authors declare no conflict of interests.

Acknowledgments

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REFERENCES


