Breast cysticercosis – a case report

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Summary

Isolated incidences of human cysticercosis have been reported world-wide, but it remains a major public health concern in endemic areas such as Mexico, Africa, South-East Asia, Eastern Europe, and South America. Cysticercosis most commonly involves the skeletal muscle, subcutaneous tissue, brain, and eyes. The breast is an uncommon site of presentation for cysticercosis. Due to its rare occurrence, breast cysticercosis is often initially mistaken for other common breast lesions such as cysts, abscess, malignant tumours and fibroadenomas. We report a case of breast cysticercosis in a young South African woman.

Keywords: breast cysticercosis, tape worm, parasitic, rare

Case report

A 38-year-old female presented with a history of a painless lump in the left breast that she had discovered three weeks prior. She had no constitutional symptoms such as fever, weight loss and/or night sweats. There was no history of nipple discharge, but she reported skin changes over and around the lump. She had no comorbid conditions, was not pregnant at the time and had no family history of breast cancer. On examination, a non-tender mobile lump was noted in the lower inner quadrant of the left breast measuring approximately 3 cm. The mass was tethered to the overlying skin, but free from the underlying chest wall. She had an enlarged lymph node in the left axilla and a clinical working diagnosis of breast cancer was made.

Mammogram and ultrasound of the breast showed an oval hypoechoic lesion with irregular shadowing and central necrosis in the lower inner quadrant, measuring 9.5 mm × 6.5 mm and assessed as a Breast Imaging-Reporting and Data Systems (BI-RADS) 4 lesion. Medial to this lesion, there was a smaller lesion with a cystic appearance and a thick wall measuring 6.6 mm × 6.5 mm. There was a large node in the left axillary tail measuring 18 mm with a 6 mm cortex, suspicious for infiltration. An ultrasound guided core biopsy of the breast mass and lymph node was performed. The histological examination of the breast mass showed a fragment representative of a tapeworm (cysticercal organism) in one of the cores. No evidence of malignancy was noted. The histology of the lymph node showed a reactive node. The patient underwent a wide local excision of the two lesions, which were removed as one specimen. On gross examination, the specimen was a portion of fibroadipose tissue measuring 35 × 25 × 20 mm with a central unilocular cyst containing gelatinous material. Microscopic histological examination showed a central parasitic cyst, with degenerate cysticercosis membrane (Figure 1), and a marked adjacent foreign body granulomatous response (Figure 2). Occasional hooklets consistent with cysticercosis were also noted in the wall (Figure 3). The patient was discharged postoperatively and followed up at the breast clinic where she was noted to have a completely healed...
surgically removed tissue, which typically shows features of parasitic cyst lined by marked foreign body granulomatous response with occasional degenerate hooklets which are diagnostic of cysticercosis. Other investigations such as ultrasound and fine needle aspirates have been reported to be useful in diagnosing breast parasitic infestation.8

Due to the rare occurrence of breast cysticercosis, treatment is not standardised. Treatment modalities include the use of anti-parasitic agents such as mebendazole and/or local excision of the lump with a clear margin around the pathology. Co-existence of cysticerci in other sites will guide the treatment choice, thus making it very important to exclude infestation in other parts of the body.

Therefore, when confronted with breast cysticercosis, it is prudent to perform a computed tomography (CT) scan of the brain, an ophthalmic examination and send stool for microscopic examination to ensure that the patient is not harbouring cysticerci in other parts of the body. In our case, there was no clinical evidence of infection elsewhere in the body, and as a result she was only offered wide local excision as definitive treatment of the lump.

This case reports serves to emphasise that not all painless breast lumps are due to breast cancer. After excluding malignancy, clinicians need to be cognizant that, although rare, infectious organisms may be the cause of a breast lump. The clinical setting and knowledge of the local water and sanitation situation allow the clinician to consider a condition such as breast cysticercosis as part of their differential diagnosis.

Conflict of interest
The authors declare no conflict of interest.

Funding source
None.

Ethical approval
Ethical approval was obtained from the Netcare Research Operations Committee (Approval number: TRIAL-2021-0048 Renewal letter for TRIAL-2017-0035 S).

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REFERENCES


