Cystic Breast Mass

by

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HISTORY

• 44 y/o Hispanic female with a cystic left breast mass.

• 20 cc of clear serous fluid with slight greenish tinge was aspirated.

• No residual mass
Differential diagnosis of breast cyst

- Clear & yellow - Fibrocystic Change
- Turbid – Cystic papillary lesion
- Brown to bloody – cancer, Intracystic papilloma
- Milky or opaque fluid – galactoceles
- Purulent - inflammation (mastitis or breast abscess)
The average egg size is 85 µm by 53 µm (range: 68 to 118 µm by 39 to 67 µm). They are yellow-brown, ovoidal or elongate, with a thick shell, and often asymmetrical with one end slightly flattened. At the large end, the operculum is clearly visible. The opposite (abopercular) end is thickened.
• Adult worms are pinkish-brown in color and bean-shaped (7 to 15 mm in length, 3 to 8 mm in width, and 3 to 5 mm in thickness).
Other parasite in breast

- S Hematobium
- S Mansoni
- S Japonicum
Cysticercosis

Microfilaria
Diagnosis

• Ova of the genus *Paragonimus* (the oriental lung fluke).
Geographic distribution and mode of infection

- Paragonimus westermani is endemic in several Asian countries, East of Russia, West Africa, Central & South America.

- Human infections occur in areas where people consume improperly cooked freshwater crustaceans (crabs and crayfish) which contain the larvae (metacercaria) of Paragonimus.
Life cycle of *Paragonimus westermani*
• **Ectopic Paragonimiasis**

• Brain
• Subcutaneous tissue
• Breast
• Liver
• Spleen
• Omentum
• Ovary
Signs & Symptoms

• Nonspecific symptoms.

• Dry cough, Hemoptysis.

• Chest pain, Hydropneumothorax & pleural effusion.
Pathologic findings

• peripheral eosinophilia, leukocytosis, and elevated serum levels of total IgE.

• Eggs, Adult worms, As time passes, worms are surrounded by thick fibrous granuloma, necrotic, calcification.
Diagnosis

• Detection of eggs in feces is the diagnostic choice.
• Intradermal test - low specificity.
• Enzyme-linked immunosorbent assay (ELISA) and immunoblot are reliable in detecting specific IgG antibodies.
• Bx.
Treatment

• Praziquantel is a drug of choice with more than 95% efficiency.
Summary

• FNA - clear fluids - cytology
• Triple test
• Examine for residual mass
• Biopsy
References

• Steven P. Fogel, M.D., Dr. Parakrama T. Chañdrasoma, M.D. Paragonimiasis in a cystic breast mass: Case report and implications for examination of aspirated cyst fluids. Diagnostic cytopathology vol 10, issue 3, pg 229-231


• CDC - Parasitic disease information


• Demay- The art & science of cytopathology