



# THE PRACTITIONER LE PRATICIEN

## The occasional breast cyst aspiration

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A 42-year-old woman presents to your office, having discovered a lump in her left breast while showering the day before. She is upset, as her mother died of breast cancer at age 50. The lump is cherry sized, symmetric, mobile and feels cystic. The other breast and both axilla are normal. Can you reassure her that the lump is benign?

Breast cysts are common lesions for women between age 30 and menopause. Determining, on clinical grounds, if a lump is cancerous, is unreliable, and the presence or absence of risk factors should not influence decisions about further work-up.<sup>1</sup> Breast cyst aspiration is an easy, minimally invasive technique that can reliably diagnose benign breast cysts in an office exam. Knowing that a lesion is a cyst will reassure the patient. Knowing that a lesion is not a cyst will help triage care on a more urgent basis.

There is little reason not to try aspirating a breast cyst. Aspirating a cancer does not spread cancer cells or worsen survival.<sup>2</sup> The sensitivity and specificity of mammography performed within 2 weeks of fine-needle biopsy are similar to those of routine screening.<sup>3</sup> Complications of needle aspiration are rare and easily treated.

### EQUIPMENT LIST

- povidine solution
- alcohol swabs
- plastic strip bandage
- sterile drapes
- sterile gloves
- 21-gauge needle
- 5-mL syringe

### PROCEDURE

#### STEP 1

Explain the procedure to the patient. The patient should expect mild discomfort during the aspiration. Sometimes patients will have easily treated complications such as bruising, localized infection or small hematoma formation. A remote risk of pneumothorax should be mentioned.

#### STEP 2

Prepare and drape the field using sterile technique. Local freezing is usually not necessary.

#### STEP 3

Attach the needle and work the syringe to ensure that the plunger moves freely.

#### STEP 4

Use your non-dominant hand to fixate the lump between thumb and index fingers (Fig. 1).



Fig. 1. Step 4: Fixate the lump between thumb and index fingers.

### STEP 5

Move the lump so that it overlies a rib, to limit the risk of pneumothorax.

### STEP 6

While stabilizing your dominant hand against the patient, grip the syringe like a pencil and advance the needle until it enters the lump (Fig. 2).

### STEP 7

Transfer your non-dominant hand to apply suction on the plunger.

### STEP 8

If watery, non-bloody fluid is aspirated (Fig. 3) and the lump disappears completely, you have both diagnosis and treatment. The patient can be reassured, and such fluid can be safely discarded.<sup>4</sup> It is important that the patient be re-examined in 4–6 weeks to



Fig. 2. Step 6: Advance the needle until it enters the lump.



Fig. 3. Step 8: If watery, non-bloody fluid (as illustrated) is aspirated and the lump disappears completely, such fluid can be safely discarded.

confirm that the lump has not returned. This will reduce the false-negative rate to negligible levels.<sup>5</sup>

### OTHER SCENARIOS

Most, if not all, other cases will require further investigation, which may include ultrasound, mammography, core needle or open biopsy. If the fluid is thick or bloody, cytological analysis is also indicated.

If no fluid is aspirated, reposition the needle in the lump and aspirate again, 2 or 3 times. Do not apply suction outside the lump. At this point, if you still have not collapsed the lump, you are now doing a fine-needle aspiration (FNA). Expel the contents of the needle onto a microscope slide for cytology.

Positive cytology for cancer will speed appropriate management. False-negative cytology can occur frequently among inexperienced samplers and pathologists not specialized in cytology.<sup>6</sup> Do not be reassured by negative cytology or delay surgical referral or investigation, particularly if the sample has little cellularity.

### SUMMARY

Patients often present to rural doctors with a new breast lump. Breast cyst aspiration may be safely attempted in most of these women. If clear fluid is aspirated and the mass disappears, a breast cyst is confirmed as the diagnosis. In this situation, if the cyst does not recur in 4 to 6 weeks, the patient is not at increased risk of malignancy and only routine mammographic surveillance is indicated.

**Competing interests:** None declared.

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