Murphy's Sign

Indications:
- A patient presenting with upper right quadrant pain/tenderness
- Concern for cholecystitis

Technique
1. Have the patient lie supine on the exam table
2. Place your left hand, fingers pointing toward the midline, on the patient's lowermost right anterior rib cage so that your index finger is resting on the most inferior rib
3. Extend your left thumb and push it into the patient's belly and hold
    a. Do not lean on the patient's rib cage
4. Ask the patient to take a deep breath
    a. You should feel the rib cage move toward you during inspiration
5. Note the patient's breathing and the degree of tenderness
6. Repeat the test with a placebo maneuver
    a. Put your hand in the same position but do not push in with your thumb
    b. Note if the patient can complete a full inspiration

Results:
- *Positive*: the patient experiences pain/tenderness sufficient to cause an abrupt halt in inspiration (normally occurs toward the end of inspiration) and acute cholecystitis is suspected.
- *Negative*: The patient is able to complete a full inspiration without significant pain/tenderness.

Diagnostic accuracy:
- Sensitivity: 44% - 97%
- Specificity: 48% - 96%
- Likelihood ratios:
    - Positive test: 2.0
    - Negative test: nonsignificant
- In older patients
    - Sensitivity: 48%
    - Specificity: 79%
    - Positive predictive value: 0.58

Notes:
- The signs and symptoms of an acute abdomen in older patients are not as classic or specific (which may explain the differences in sensitivity and specificity).
- In elderly patients, a positive Murphy's sign is useful, but a negative sign is not exclusive and other diagnostic tests should be performed promptly.

References:

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