

Distal biceps rupture: the Hook test

The patient. A 45-year-old man felt a pop at the front of his elbow while lifting a heavy box, followed by bruising in the crook of the elbow.

Starting chance. For this exercise, assume a 50% chance of distal biceps rupture before testing. This is a teaching assumption, not a published figure.

Question. You suspect a distal biceps rupture. What does the hook test add?

Teaching case: Answer

The test. Elbow at 90°, forearm fully supinated. From the lateral side, try to hook your index finger under the distal biceps tendon; compare sides. Positive: No firm cord to hook, or a clear difference from the other side.

Why this test. The library rates this test as ‘best used to rule in’ for distal biceps rupture. Sensitivity 71%, specificity 96%; LR+ 15.71, LR– 0.3.

Result	Likelihood ratio	Chance after the test
Positive	15.71	about 94%
Negative	0.3	about 23%

Take-home point. The positive result is the useful one: it moves the chance from 50% to about 94%. A negative result brings it down to about 23%, so about 23 in 100 people like this would still have the condition; a negative does not rule it out on its own.

Figures: Zwerus EL, van Deurzen DFP, van den Bekerom MPJ, The B, Eygendaal D. Distal Biceps Tendon Ruptures: Diagnostic Strategy Through Physical Examination. Am J Sports Med. 2022;50(14):3956–3962. They describe the patients in that study, not every patient. Worked with odds: starting odds × likelihood ratio = odds after the test.