

Watson's test

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Watson's Test &/Or The Scaphoid Shear Test

The examiner and patient face each other as for arm wrestling.

The examiner's fingers are placed dorsally on the distal radius, while the thumb is placed on the palmar distal tuberosity of the scaphoid.

The other hand holds the metacarpals.

Firm pressure is applied to the palmar tuberosity of the scaphoid while the wrist is moved in ulnar deviation which places the scaphoid in extension.

While the wrist is moved in radial deviation the scaphoid cannot flex, as it is blocked from flexing by the examiner's thumb.

In case of scapholunate tear, or in lax wrist patients, the scaphoid will move dorsally under the posterior margin of the radius and will reach the examiner's index finger, thus inducing pain.

Sometimes this test may only be painful, without any perception of dorsal scaphoid displacement.

When pressure on the scaphoid is removed, the scaphoid goes back into position with what Watson described as a "thunk" (a clunk).

In certain patients, the absence of normal mobility compared to the uninjured wrist may be due to swelling and/or synovitis.

To avoid false-positive testing, the examiner should first place his fingers on the posterior surface of the scaphoid to detect spontaneous pain.

Even though the Watson's test is the best known for scaphoid subluxation, its sensitivity and specificity are low.

In two studies, this test proved positive in 20% of normal individuals.

In another study, the prevalence of a painless snap when removing thumb pressure was 32%, thus showing patient laxity.

However, 14% of these lax patients were positive only in one wrist.

Lane suggested modifying the Watson's test by moving the scaphoid only from an anterior to a posterior position (he called it the Scaphoid shift test).

This modification would enhance the test's sensitivity by using simple movements.

The Wrist-Flexion Finger-Extension Maneuver

Was described by Watson.

With the elbow resting on the table, the wrist is placed in flexion and the patient is asked to extend the fingers.

Application of pressure on the nails may reveal pain in the scapholunate interval.

Kleinman's Shear Test

(Which some authors call the shuck test!): With the patient's forearm in a vertical position, the examiner places one finger on the posterior part of the lunate and with his contralateral thumb placed palmar, pushes the pisiform dorsal which arouses pain in the lunotriquetral joint.

This test might be more sensitive and more specific than the Reagan's test.

The Lunotriquetral Ballottement Test &/Or Reagan's Test

(Also called the Shuck or shear test, depending on the authors): as in the scapholunate ballottement test, the clinician holds the lunate bone between his thumb and index finger with one hand, and moves the triquetrum with the pisiform dorsal and palmar.

The aim is to appreciate instability (very difficult) and above all the arousal of pain.

The sensitivity of this test varies from 33 to 100%, depending on the authors, and its specificity is still unknown.

The Scapholunate Ballottement Test

This test is designed to highlight any abnormal motion between the scaphoid and lunate bones.

With one hand the examiner holds the scaphoid between his thumb (placed distally over the scaphoid tuberosity on the palmar side) and index finger (placed posteriorly and proximally over the proximal pole of the scaphoid).

The other hand holds the lunate.

The hands then move in opposite directions and appreciate the ballotement between the two bones.

It may be difficult to appreciate instability as the normal laxity of the scapholunate joint varies greatly among individuals.

However, if the test induces pain, this is a good sign.

This test, as all tests, may be compared to the opposite wrist to appreciate normal variations.

Scapholunate ballotement is more marked when the wrist is in slight flexion, and, in this position, dorsal protrusion of the second row is sometimes visible.

Flexing the wrist also brings the lunate more dorsal and distal to the dorsal rim of the radius making it easier to palpate the lunate.

Another technique to palpate the scapholunate interval is to place the index finger on the dorsal and distal pole of the lunate and then move the index finger radially while moving the wrist in flexion and extension.

One can sometimes feel a groove corresponding to the scapholunate interval, or more often a slight protrusion of the proximal pole of the scaphoid.

The limitations of these tests are connected with the difficulty to hold the lunate bone correctly.

The Ulnar Snuff Box Compression Test &/Or Linscheid's Test

This test may be the least specific according to Kleinman.

The thumb placed on the ulnar side of the triquetrum exerts an axial pressure directed toward the lunate, which arouses pain.

The Raised Triquetrum Test

Was recently proposed by Zradkovic and Sennwald (personal communication).

The examiner holds the patient's hand proximal to the wrist and places his thumb on the triquetrum. From the neutral position, without flexion or extension, he performs radial and ulnar deviation movements and appreciates the dorsal and palmar movements of the triquetrum, which should be compared to those of the other wrist.

The sensitivity and specificity of this test are still unknown, as are the anatomical lesions which cause the test to be positive.

As pointed out by Gilula, the triquetrum is very prominent or dorsal with radial deviation, and moves palmarly and may even disappear with ulnar deviation.

On plain radiographs, the triquetrum is located "onto" or proximal on the hamate with radial deviation (superposed), and "lateral" or ulnar to it with ulnar deviation (juxtaposed) [Laredo, personal communication].

Midcarpal Shift Test

To test for midcarpal instability on the right wrist, the examiner stabilizes the patient's forearm, with the left hand in a pronated position.

With the patient's wrist in 15° of ulnar deviation, the examiner's right thumb exerts volarward pressure at the level of the distal capitate.

The wrist is then simultaneously axially loaded at the metacarpals and ulnarly deviated.

The result is positive if a painful clunk occurs that reproduces the patient's symptoms.

The Synovial Irritation Sign Of The Scaphoid

To elicit this sign, pain is induced by exerting pressure on the scaphoid through the anatomical snuffbox.

This sign is usually positive in patients with scaphoid instability, but its specificity is very low.

The Scaphoid Bell Sign

This is performed by palpation of the scaphoid tuberosity anteriorly through the radial groove while placing the index finger in the anatomical snuffbox.

With ulnar deviation of the wrist, the anterior protrusion of the distal scaphoid tuberosity disappears and the proximal pole appears in the snuffbox.

With radial deviation, the proximal pole disappears in the snuffbox and the protrusion of the distal scaphoid tuberosity reappears in the radial groove.

Any disruption of this normal mechanism is suggestive of instability, but the sensitivity of this test seems very low.



External Websites

http://www.wheelsonline.com/ortho/watson_test

http://www.wheelsonline.com/ortho/the_scaphoid_shift_test_1

<http://www.emedicine.com/orthoped/TOPIC619.HTM>

<http://emedicine.medscape.com/article/1241610-overview>

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