RADAR, SACROILIAC Joint evaluation test

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Shortly we had the opportunity to read a very nice presentation made by Ambra (Thank you Ambra!) of the Andry Vleeming course she attended.

Of course we are all very grateful to the great contribution of Andry for his work on the SIJ.

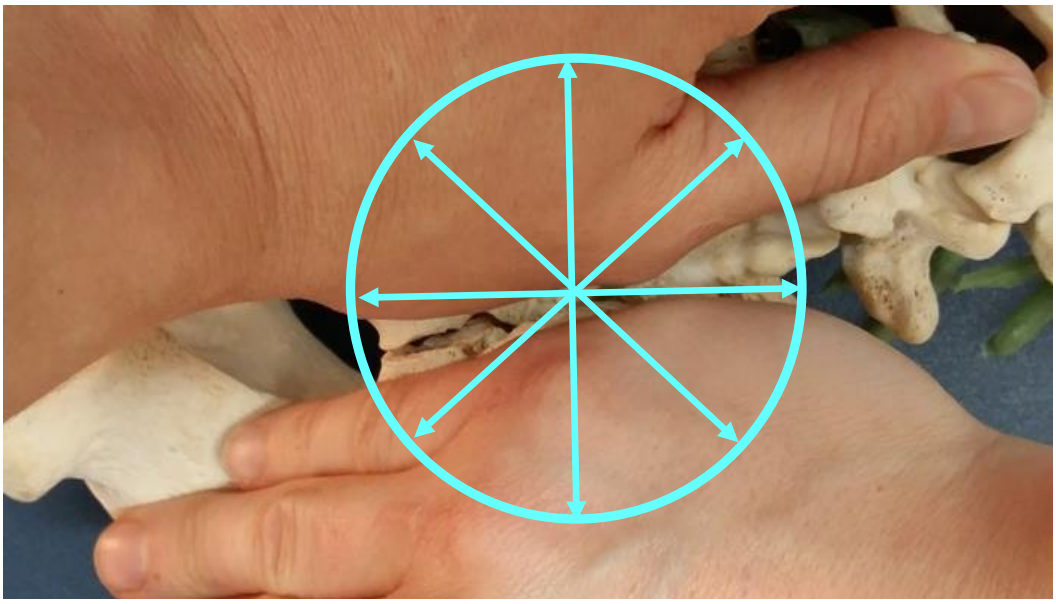
We are all aware that this semi-mobile joint has a very restrictive mobility (2° nutation and 2mm translation after Bogduck) due to a selfbracing mechanism caused by forme and force closure supported through very strong ligaments. We, clinicians, also agree that the SIJ may be a source of low back and low extremity pain. (Potter and Rothstein 1985, Sturesson et al 1989, Shaw 1992).

The problem remains as mentioned to find a test which associates reasonably high level of sensibility and sensitivity.

The difficulty is to recognise the proportion of the population with or without pathological or rather symptomatic conditions with a quick single test. For a complete examination, a variation and combination of different tests, including especially differenciation tests, remains of course necessary.

My proposal for a quick test (and also good treatment technique!):

The RADAR, SIJe test



Anatomy of SIJ

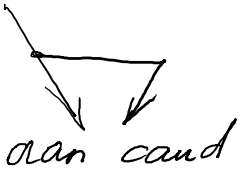
The anatomical complexity and difficulty of this joint resides in the high degree of variability in the plane, the irregularities and asymetry. Surfaces of the ilium, covered by fibrocartilage, are C-shaped while those of the sacrum, covered by hyaline cartilage, may be more L-shaped. They have ridges and grooves. The sacroiliac joints should be considered therefore a various degree-of-freedom joint.

The difficulties of tests are to find a possibility to put stress, shear force, compression, distraction on this approximately 17 square cm irregular surface. The goal is to exhaust ALL small degree-of-freedom in all directions of movements, knowing that the bigger ones are nutation/counternutation, torsion, gliding and compression/distraction.

Thus my choice of radar, compass (Rose of the winds) technique which allows to stress, to work, on all parts of the joint, applying forces directly on the joint. Of course it does not prevent Lx movements, but they are milder. As usual, reassessment remains the key!

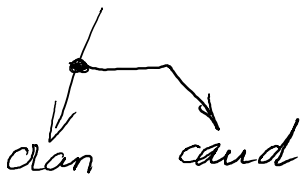
Description of the Radar SIJe test

Phase 1



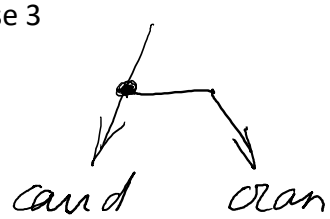
The technique is very easy. Patient lying prone. Therapist standing on patient (right) side, looking to the head of patient. One hand (left) on sacrum, angulating cranially and to the (right) of patient, the other hand on the ilium, angulating caudally and medially. This combination of simultaneous central PA and unilateral PA creates a force of nutation and compression.

Phase 2



Therapist continues this mobilisation and starts now to turn with his trunk, rotating like a radar, down the Roses of the wind, until he faces the feet of the patient. This combination creates now a force of nutation and distraction.

Phase 3



Therapist remains in same position but crosses his hand: right hand on sacrum, angulating caudally and to the (right) of patient, the other hand on the ilium, angulating cranially and medially. This combination creates now a force of counternutation and compression.

Phase 4

Therapist continues this mobilisation and starts now to turn with his trunk, rotating like a radar, up the Roses of the wind, until he faces the head of the patient. This combination creates now a force of counternutation and distraction.

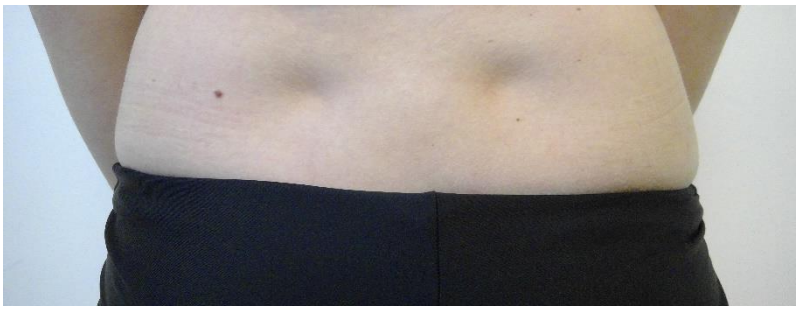
Same procedure can be repeated at S1, S2 and S3 level.

Same technique can be used, for example by Lx instability, with lumbar spine in E or in F.

See the video!

Radar SIJe Test.mp4

Case study



A 20 years old patient consults for therapeutic diagnosis.

C/O

Main problem

Pins and needles in the left heel. No other symptom. No disability or handicap.

Body chart

Constant pins and needles under the left heel. All body ✓

History

Fallen from bike one month ago. Scars on right the knee. First symptoms in the left heel some days later. Constant since then. No evolution.

No previous history except sacrum fracture by skiing when 12 years old, without consequences.

Never consulted before. No other treatment form.

Behaviour

Nothing worsening or relieving. No problems to do her sports. Biking, jogging, dancing and climbing do not influence the symptoms. Sitting all day as student. Night: no change.

Special questions

No medications, X-Rays, red flags.

P/E

Observation

Athletic young girl.

Active movements

1. Foot, knee: ✓✓
2. Lx: ✓✓
3. If necessary: ✓✓

Neurological examination

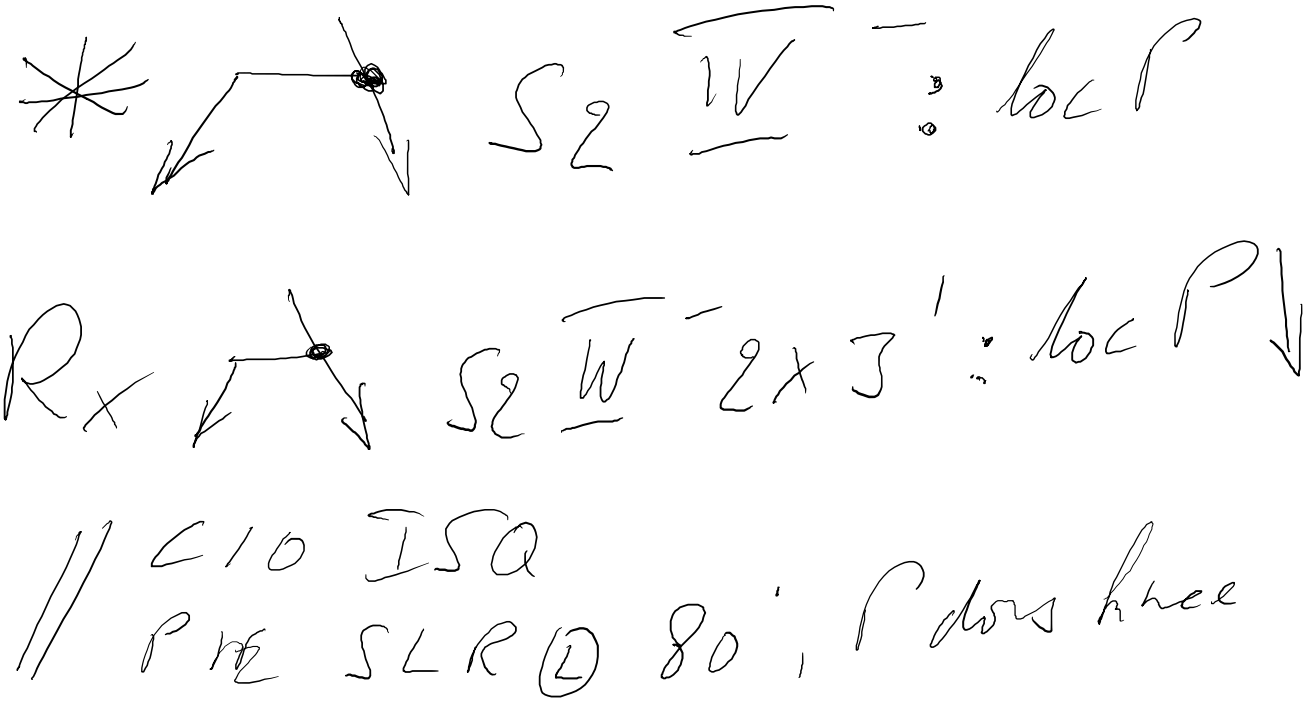
S, R, M: ✓

Neurodynamic tests

SLR r : 90°, ✓ ★SLR l: 60°, P dors. knee L + dor E: 10°, pulling more

Passive mouvements

Foot, Lx: ✓✓ Reassessment: ISQ



Hypotheses

Increased mechanosensitivity of S1, S2 nerve roots alterable through SIJ mobilisation with radar SIJe test. The patient was told to phone for a 2nd treatment if necessary. She never came back!

Conclusion

Of course we need much more evidence than a case study to proof the validity of this Radar SIJe Test. I hope nevertheless to have awakened the impulse to make good quality RCT demonstrating the fairly high specificity and sensibility found clinically with this Radar SIJe test.

My answer to the questions of:

1. *Van der Wurff et al, Man. Ther. et al. (2000)*

« Therefore, at this time, it is questionable wether any SIJ tests are of any value for clinical practice. »

2. *Schomacher J., Manuelle Therapie 7 (2003)*

"Treat despite lack of evidence"

is a clear positive one! Pure SIJ problematic is very rare, but it is worth examining and treating it, with the full range of the different techniques taught on the courses and with this short, practical and efficient Radar SIJe test.

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