

Evidence-Based Diagnosis and Treatment of the Painful Sacroiliac Joint

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As also noted by Dr. Laslett there is an overabundance of book and journal article references out there that provide models for diagnosis and management of sacroiliac joint dysfunction (SIJD) based solely on authority-based knowledge and—in my opinion—unwarranted extrapolations from anecdotal clinical observations and from basic science studies on lumbosacral region anatomy and (patho) biomechanics. When I was first introduced to Dr. Laslett's work on reliability of individual sacroiliac joint pain provocation tests¹, I have to admit that I was elated and at the same time confused.

Identifying myself strongly as a physical therapist specializing in orthopaedic manual physical therapy (OMPT), SIJD for me was a very real construct. I had spent many years perfecting means both to diagnose this dysfunction with manual diagnostic tests and to treat it with specific manipulative interventions and exercise instruction. However, time and again the positional and motion palpation tests required for establishing a specific OMPT diagnosis of a positional fault and/or direction of hypomobility that then could guide those favored manipulative interventions were shown to have insufficient reliability for clinical use. I was also well aware that these studies showing insufficient reliability questioned the very validity of the SIJD construct². So finally, Laslett and Williams¹ had established that four provocation tests had sufficient interrater reliability,

whereas two other tests were noted to be potentially reliable.

Confusion set in for me after this initial elation when I realized that my clinical construct of SIJD, defined by Paris³ as a state of altered mechanics, characterized by an increase or decrease from the expected normal or by the presence of an aberrant motion, was in fact quite different from a diagnosis of sacroiliac joint pain. At that time—and still to some extent—my clinical reasoning was guided by a mechanism-based classification system that was founded on the premise that impairments identified during examination were the cause of musculoskeletal pain and dysfunction⁴. So now I was able to diagnose pain emanating from the sacroiliac joint but I was no closer to an evidence base for a diagnosis of SIJD that could then guide my specific OMPT interventions.

Over time my clinical reasoning—and that of many within physical therapy—has become increasingly influenced by treatment-based classification. In the treatment-based system, a cluster of signs and symptoms from the patient history and physical examination is used to classify patients into subgroups with specific implications for management⁵. In more recent research also discussed in detail in Dr. Laslett's current review paper, Laslett et al⁶ incorporated the treatment-based McKenzie classification system with a cluster of sacroiliac joint provocation tests and showed excellent sensitivity and specificity values for the diagnosis of sac-

roiliac joint pain. Sensitivity further increased when diskogenic patients were excluded based on the repeated movement examination⁶.

There were some very strong points to this research indeed. One was the issue of adequate face validity of the test cluster used based on established interrater reliability of the individual tests as also noted by Dr. Laslett here. Of course, interrater reliability is increased even when clustering individually unreliable tests if doing so increases the amount of options that are considered agreement. By using at least four proven reliable tests in the cluster of sacroiliac joint provocation tests studied, Laslett et al⁶ greatly increased this aspect of research validity. Also, this research allowed classification of at least some of the patients, i.e., the diskogenic patients, to be included in a treatment-based system that then could determine treatment. But still, even with this research we are again left with the question as to what to do with patients we diagnose with sacroiliac joint pain?

Although we could argue about the appropriateness of using prevalence data from studies in a specialized secondary care setting⁷ as pre-test values to establish post-test probability of a diagnosis of sacroiliac joint pain in patients with low back pain presenting to physical therapy and other primary care settings, I agree with Dr. Laslett's suggestion of adopting the combination of a McKenzie evaluation and his cluster of sacroiliac joint provocation tests as a sacroiliac joint clin-

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ical prediction rule (SIJCPR). Clinical prediction rules (CPR) are decision-making tools that contain predictor variables obtained from patient history, examination, and simple diagnostic tests that can assist in making a diagnosis, establishing prognosis, or determining appropriate management⁸. It is clear that the proposed SIJCPR is a diagnostic CPR, although Dr. Laslett does suggest—based on his extensive clinical experience—that the matched interventions for patients fitting this CPR are lumbosacral stabilization and—although notably outside of the physical therapy scope of practice—intra-articular infiltration.

To establish this proposed link between the SIJCPR and said interventions, the next step is to now submit this SIJCPR to the final two steps of the Assessment-Diagnosis-Treatment-Outcome (ADTO) research model first described by Spratt⁹. Reliability of this proposed diagnostic group of patients with sacroiliac joint pain as normally studied in the Assessment-Diagnosis phase seems to have been sufficiently established. Observational cohort studies are now required to see if the patients

identified respond consistently and favorably to the proposed matched interventions and finally randomized controlled trials determine which of the interventions shown efficacious in the second step is in fact the most efficacious. And who knows, maybe this research will find that my favored intervention of manipulation has a place in the management of patients diagnosed with sacroiliac joint pain after all? If not, it is up to us using this intervention to establish—by way of this same ADTO—model and mirroring the impressive work done by Dr. Laslett—what the diagnostic characteristics are of those patients that do respond favorably to manipulative interventions.

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