

When Knee Pain Isn't Really Knee Pain

Physical Therapists faced with patients who have knee pain must make sure the problem is really coming from the knee. This is true for all musculoskeletal problems, whether it's back, neck, shoulder, hip, knee pain, and so on.

To accomplish this, the Physical Therapist performs a *regional* exam. Joints above and below the area of pain or other symptoms must be considered as a potential source of the problem. This concept is referred to as the *regional interdependence model* of patient examination.

In this study, the case of a 25-year-old female runner with knee pain was presented. It turned out that her symptoms were really caused by a problem in the *sacroiliac joint* (SIJ). How did the regional interdependence model help guide the diagnostic process?

The exam begins with a thorough history. Although the patient was involved in training for a marathon, she could not remember any injury or think of any cause for the hip pain. The pain was severe enough for her to stop running. The patient was screened carefully for risk factors and possible *etiology* (cause). Questions were asked about training, injuries, medications, menstrual cycle, and past medical history. Everything was negative as a possible cause of her knee pain. '

The exam continued with an evaluation of posture, range-of-motion, muscle strength, and joint stability. Special tests were performed to help identify impairment of the soft tissues around the knee. There were no signs of a knee joint problem.

Knee pain can be caused by disc problems, or hip, SIJ or ankle joint problems. The therapist performed a regional interdependent exam involving both legs. Muscle flexibility, alignment, and exam of the joints above and below the knee were carried out.

The lack of any positive findings caused the examiner to broaden the regional exam to include the sacrum and SIJ. The author reports on selected reliable and valid tests that were performed and their results.

The Physical Therapist's diagnosis for this patient was referred knee pain secondary to sacroiliac joint dysfunction. A second, more descriptive label was suggested. From an osteopathic biomechanical model, this problem would be labeled as a *right-sided pubic elevation and backward rotation of the ilium with a rotated sacrum*.

The problem was likely caused by a new lunge exercise the patient started the day before her symptoms began. The deep squat position may have contributed to a shift in SIJ alignment. Tight hamstring muscles and the repetitive force from the ground up through the joint from running were likely aggravating factors.

The diagnosis was confirmed when symptoms were relieved after one treatment. Physical Therapy treatment included isometric contractions and a manipulative procedure to reposition the SIJ. A home program of flexibility exercises and instructions to avoid deep lung stretches was advised. The patient resumed her running and training schedule without any problems. She completed her marathon successfully.

The author makes note of all the possible problems with this working diagnosis. For example, we know there's a link between the knee and the SIJ. But the value of some of the tests related to the SIJ and pelvis has not been proven yet. Other factors such as patient expectations, the placebo effect, and neurological mechanisms may have a significant role.

The value of this case report was to point out the importance of a regional interdependent exam for patients with musculoskeletal problems. Although the exact mechanism for referred pain is not always known, a broad exam of this type will help Physical Therapists identify the structures involved. A careful diagnosis will direct treatment to be as specific as possible. A goal is to get patients like this one back on their feet and running!

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