Dynamic Chiropractic

DIAGNOSIS & DIAGNOSTIC EQUIP

Things I Have Learned: Confirming the Positive SLR

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We all know that when performing an exam on a patient, it is necessary to document positive findings. This not only confirms the clinical impression gained during the interview, but also helps to hone in on your diagnosis. The straight-leg raise (SLR) test probably is the most well-known, recognized and used test in any doctor's arsenal. As I have shared before, the SLR is a great preliminary test to identify lower back pain. If it is positive, however, other testing must be done to arrive at a valid diagnosis.[1] The degree of flexion at which pain is experienced, and the location and nature of the pain, are all important factors in notating the findings of a positive SLR.

But how do you know if you are achieving a "true" positive? This question is important for every examiner, but even more so if you are performing a defense-type exam or a functional-capacity evaluation. It is well-recognized that patients with legitimate pain often may magnify their symptoms for a number of reasons, and patients without pain may have reasons for falsifying complaints and symptoms.[2] It is incumbent upon the examiner to ensure that the testing performed and findings recorded are as valid as possible.

When performing the passive SLR, it is important to remember that the test often will be positive below 20 degrees - if it is going to be positive.[3] Patients with pain above 60-70 degrees may just have reached the limit of their flexibility. Evans' text reminds us that the lumbar nerve roots have a very narrow range of movement for stretching. The nerve roots are not brought to tension and stretched by the SLR until 35-70 degrees of angulation have been reached. If there is compromise of the normal space (i.e., disc bulge, inflammation), this space is used up and the pain will manifest more quickly - thus giving you a positive finding of pain. It is important to fully evaluate a patient with a positive SLR, as nerve root compression may mimic sacroiliac inflammation. When performing the SLR, remember that sciatic pain in the leg, produced from 0-30 degrees, indicates nerve root compression. Sciatica produced between 30 and 60 degrees indicates sacroiliac disease. Sciatic pain produced with leg motion beyond 60 degrees points to lumbosacral conditions.[4,5] Pain may be experienced much quicker when performing the active SLR.

When performing this test, it may be reasonable to repeat the maneuver more than once, or you may be inclined to perform it in the seated position for continuity. However, the test should be positive at relatively the same degree every time. The American Medical Association states that for a study to be valid, motion values must be calculated from a series of at least three repetitions of a movement, which must fall within a deviation of 5 degrees or 10 percent, whichever is larger.[6] To be that specific, your testing requires at least a goniometer or dual inclinometry.

Milgram's test will help with the clarification of pain with an active SLR. Have the patient hold both

legs up about 2 inches off the table for as long as tolerated. This action puts the iliopsoas and anterior abdominals under load and increases intrathecal pressure. Although testing protocols suggest having the patient hold this position for at least 30 seconds, if the patient is able to maintain this position for any amount of time without pain you are able to rule out intrathecal pathology.[7] (Fatigue does not indicate a positive finding.) Pain with this maneuver, accompanied by loss of strength, indicates a space-occupying lesion, such as a disc herniation, and will thus warrant further diagnostic evaluation.

If you have the impression that your patient is not giving you a valid test, you are now obligated to either confirm the patient's complaints *or* your suspicions of embellishment. This can be done without letting the patient know. The quickest and easiest way to do this is by employing the Hoover's test, which should be routinely performed in conjunction with the active SLR. Simply, the examiner cups his hands under the heels of the patient and asks them to raise the affected leg (Milgram's one leg at a time). If the patient is genuinely trying to raise their leg, they will put pressure on the calcaneus of the opposite leg to gain leverage, and you will feel the downward pressure on your hand. The malingering patient will report pain or inability, and the examiner will not feel any pressure from the opposite leg, indicating that the patient is not really trying.[8] Although such a finding often will suggest malingering, it also can indicate a non-organic cause, such as a hysterical neuropathy (poor pain tolerance).

The SLR is a great test, but it should not stand alone. If you have pain with a SLR, you are obligated to test further to define the source of the patient's complaints. There are great tricks and maneuvers that can help you with your exam, but there are no shortcuts. When you have positive findings, take the time to fully evaluate the complaint. Remember when performing the SLR to always note where the pain goes. Is it in the back, the buttock or the leg? Does it go down to the knee or foot? Did it cause tension or pulling up into the neck?[9] Such notes are invaluable when documenting your patients' complaints and the extent of the irritation. This extra documentation also can help make the difference if you must justify your diagnosis to an insurer or third party. Take the extra few seconds to add these tests into your exam routine. They will serve you well.

References

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