Dynamic Chiropractic

CHIROPRACTIC TECHNIQUES

Test Combinations in Patient Examination, Part 2: Tests for the Same Pathology

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Most orthopedic and neurological tests are taught as individual entities. They are then grouped into regions and/or categories of pathology. Seldom are they taught in patterns or combinations that consider efficiency in performance or clinical use. There are exceptions to this: Brudzinski's test for meningeal irritation is almost always taught in combination with Kernig's test for meningeal irritation. This occurs with enough consistency that many authors consider the procedures to be a single test.

There are multiple tests with different mechanisms of performance for a specific pathology. This gives the examiner more than one testing option and the opportunity to use other tests in combination. While Brudzinski's and Kernig's tests are for the same pathology, they have different mechanisms of performance. Brudzinski's involves flexion of the head and cervical spine, while Kernig's involves the same mechanism as Lasegue's test: hip flexion followed by knee extension.

Combining these tests or other tests offers advantages over using the tests individually. Using them in combination allows the tests to be performed simultaneously, saving time during the examination process. The combination also offers increased stress on the tissue being tested. The intent is to increase the likelihood of detecting the pathology in question. If the tests are negative in combination, there is little reason to perform the tests individually, as they are not likely to be positive. The doctor can move on, saving time. On the other hand, if a combination of tests produces a positive result, the doctor is obligated to perform the tests individually.

Combinations of this nature provide the possibility of grading the severity of pathology. As stated, if the tests are not positive in combination, the odds of them being positive individually are low. If the tests are positive in combination but not individually, then the pathology is not as severe as if the tests were positive in combination *and* individually. Obviously, the prognosis for patients with tests positive in combination and negative individually is more favorable than for a patient with tests positive in combination and individually.

This information leads to the possibility of using test combinations to also gauge progress. For example, let's say a patient's symptoms are reproduced both in combination and individually during the initial examination. However, during the progress exam these symptoms are *only* reproduced in combination. This would be evidence of patient improvement.

Dozens of other combinations of this nature are possible. The straight leg raise (SLR), Bragard's and Lindner's tests are a good example. The mechanism for SLR is self-explanatory. Bragard's involves dorsiflexion of the foot following SLR, and Lindner's requires flexion of the cervical spine by the patient. Each test has a different mechanism, yet they test for the same pathology.
All three tests can be performed simultaneously. If they are negative in combination, they are all negative individually. The doctor can then proceed with the next test or combination of tests. If the tests are positive in combination, the doctor should perform all three tests individually.

The combination of SLR, Bragard's and Lindner's can be intensified by adding Bonnet's test.

Bonnet's consists of adducting the leg and internally rotating the foot during the SLR maneuver. This series was described by Breig-Troup. The additional test adds traction to the sciatic nerve and piriformis muscle. The tension placed on the tissues by four tests is greater than that of three tests and much greater than any of the tests individually. The chances of the patient having radicular pathology if all four tests are negative in combination are minimal.

Hoffman's pathological reflex and Lhermitte's test can both identify upper motor neuron lesions. Hoffman's, which is the upper extremity equivalent of Babinski's reflex, involves nipping the middle finger and watching for flexion of the fingers. When positive, Lhermitte's elicits electric-like sensations in the patient's extremities with cervical spine flexion. The combination of the two tests is referred to as a dynamic Hoffman's maneuver. Again, the combination increases the chances of identifying the pathology in question. When both tests are negative in combination, both tests are negative individually.

The described combinations provide diagnostic information more efficiently than typically gleaned from use of the tests individually. It must be reiterated, however, that the examiner must at all times be prepared to perform and interpret the tests individually when necessary, and know each test individually in order to understand the combinations and reverse the process for the most accurate diagnosis.

It is recommended that the reader study the tests listed here individually before using them in combination. After study of these and other tests, testing combinations will become more evident and their employment will enhance any examination.

Part 1 of this article focused on the value of test sequencing. It appeared in the July 1, 2009 issue.

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