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The Lacertus Antagonist Test: A Predictive Test for Strength Recovery after Surgery for Lacertus Syndrome

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Like others, our experience with median nerve compression at the elbow was limited, as we infrequently made this diagnosis, and rarely indicated patients for nerve decompression.[1,2]

The earliest publications describe the need for a thorough physical examination for a diagnosis to identify the presence of weakness of the muscles innervated by the median nerve in the hand and the forearm. A symptomatic clinical triad has been described by Hagert.[3] First, a manual test of strength of the muscles innervated by the median nerve distal to the lacertus fibrosus must show clear weakness, especially the flexor pollicis longus (FPL), dlexor digitorum profundus of index finger (FDP II) and flexor carpi radialis (FCR) tendons. Then, external pressure to the median nerve at the lacertus fibrosus should elicit pain and, in certain cases, a positive Tinel sign. Finally, the scratch collapse test over the median nerve at the lacertus fibrosus should be positive. The diagnostic value of electrodiagnosis and magnetic resonance imaging are limited, and do not contribute to the clinical diagnosis.[4]

This article describes a new test called the lacertus antagonist test (LAT). The aim of the test was to confirm the diagnosis of lacertus syndrome, restoring the strength of FPL and FDP II when compressing the elbow medially.

If multiple clinical signs point in the direction of a median nerve compression, electrodiagnostic testing is unlikely to improve diagnostic accuracy.[5] After confirming the lacertus syndrome with the clinical triad described, we present the LAT to add a new test for this diagnosis.

The first step is to face the patient in supine position with the wrist and elbow flexed. The patient is asked to make a key pinch with the thumb and index finger. The examiner tries to pry the fingers open. In case of lacertus syndrome, it is easy to open.

The same maneuver is performed again, but the examiner's other hand compresses the lacertus fibrosus at the elbow by pulling the pronator teres muscle medially. The test is considered to be positive if the strength of the key pinch is improved so that the examiner cannot pry open the fingers. Both the patient and the clinician should notice improvement for the test to be positive. (**See Video [online]**, which explains how to perform the lacertus antagonist test after diagnosis of the lacertus syndrome with the triad of Hagert. The patient and clinician observe the immediate recovery of power like observed after surgery of the lacertus syndrome.)

The theory of the fascia and cutaneous nerves of the skin has been studied by Alison Taylor using mobilization and elastic taping, as detailed in her conference presentations "Treating without Pain." Compression of the lacertus simulates temporary elastic taping of the median nerve at the elbow.

The weakness of a clinical test, and especially a new one, is that there is no animal or cadaveric experimentation possible. The clinician needs several tools to make an accurate diagnosis: (1) history of patient symptoms, (2) the exploration of the anatomy of the nerves, (3) the knowledge of when and how to interpret diagnostic tests such as electrodiagnostics and imaging modalities, and (4) physical examination tools focused on nerve entrapment.

The LAT should be evaluated to be included in the toolbox of the clinical search for the Lacertus syndrome in routine practice: it needs to be analyzed to calculate its sensitivity and specificity with several examiners.

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Related Digital Media are available in the full-text version of the article on www.PRSGlobalOpen.com.

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