The Scratch Collapse Test and Evaluation of Patients with Coincident Carpal and Cubital Tunnel Syndrome

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Introduction
• Coincident ulnar compression at the cubital tunnel can coexist with carpal tunnel syndrome, but poses a diagnostic challenge
• The Scratch Collapse Test - somewhat controversial provocative diagnostic tool, strong performance in the hands of experienced practitioners
• May be an excellent adjunct for diagnosing coincident ulnar neuropathy at the elbow in carpal tunnel syndrome patients.

Objectives
• To evaluate the diagnostic performance of the Scratch Collapse Test for patients with simultaneous carpal and cubital tunnel syndromes.
• To evaluate the benefit of incorporating the Scratch Collapse Test into an existing diagnostic scheme

Materials and Methods
• Retrospective Chart Review
• 111 patients with carpal tunnel syndrome with and without coincident cubital tunnel syndrome
• Compared relative diagnostic performance of the Scratch Collapse Test to other metrics
• Re-evaluated the existing Koh-Benhaim Score
  • Original 5 point score – (KB)
  • Modified 6 point score (+Scratch Collapse) – (KBS)
  • Modified 5 point score (+Scratch Collapse, -Cubital Tunnel Tinel’s Sign) – (KBT)
• Relative diagnostic performance of each model was compared via area under Receiver Operator Characteristics (ROC) curves

Results
• Scratch collapse test outperformed all other tests, with a sensitivity of 78.69%.
• Original KB ROC AUC: 0.9295
• Modified 6 point (KBS): 0.9404
• Modified 5 point (KBT): 0.9539

Conclusions
• The Scratch collapse test significantly improved the holistic diagnostic evaluation of patients with coincident compression neuropathy.
• Best performance noted with the modified scheme including the scratch collapse test and excluding the cubital tunnel Tinel’s sign.

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