

PETTERSSON, K; HILDINGSSON, C; TOOLANEN, G; FAGERLUND, M; BJORNEBRINK, J **Disc Pathology After Whiplash Injury: A Prospective Magnetic Resonance Imaging and Clinical Investigation.** **SPINE.** 1997 FEB. 22(3). pp 283-8.

ABSTRACT: Study Design: This study was used to evaluate the relationship between magnetic resonance imaging finding and clinical findings after whiplash injury.

Objectives: To identify initial soft-tissue damage after whiplash injury, the development of disc pathology, and the relationship of disc pathology to clinical findings.

Summary of Background Data: Although a few studies have reported pathological magnetic resonance imaging findings after whiplash injuries, there is no prospective study published to our knowledge.

Methods: Thirty-nine patients, 20 women and 19 men, with a mean age of 32 years, were treated for whiplash injury. Magnetic resonance imaging and clinical examination were performed in a blinded manner at a mean of 11 days after trauma. The procedure was repeated at a 2-year follow-up visit. Two patients could not be examined with the second magnetic resonance imaging because of claustrophobia and pregnancy, respectively.

Results: The authors found 13 patients (33%) with disc herniations with medullary (six cases) or dura (seven cases) impingement over the 2-year follow-up period. At the follow-up examination all patients with medullary impingement had persistent or increased symptoms, and three of 27 patients (11%) with no or slight changes on magnetic resonance imaging had persistent symptoms. No ligament injuries were diagnosed.

Conclusion: Although disc pathology seems to be one contributing factor in the development of chronic symptoms after whiplash injury, it may be unnecessary to examine these patients in the acute phase with magnetic resonance imaging; correlating initial symptoms and signs to magnetic resonance imaging findings is difficult because of the relatively high proportion of false-positive results. **Magnetic resonance imaging is indicated later in the course of treatment in patients with persistent arm pain, neurologic deficits, or clinical signs of nerve root compression to diagnose disc herniations requiring surgery.**