

WHERE'S THE SCIENCE? Can your expert back up their opinion?

I am writing this newsletter on my flight back from the 13th Annual Scientific Conference of the Spine Research Institute of San Diego. This is my first time attending the conference, although I buy and review the proceedings every year. The program is essentially a “year in review” of all the scientific literature published in the medical and engineering journals and conferences, as it relates to injury. The conference inspired me to write a series of newsletters. I plan on selecting studies for review that will better equip you to address topics of controversy by citing the scientific literature.

In this newsletter, I will review is a 2008 paper by Abbassian, A and Giddins, GE titled *“Subacromial Impingement In Patients With Whiplash Injury To The Cervical Spine” J Orthop Surg Res (Open Access) 3:25, 2008*. The study examined 220 patients involved in Whiplash with neck injury who were sent for medicolegal report to the authors. All patients were examined for clinical evidence of shoulder impingement. 26% (56/220) had shoulder pain following injury. 5% (11 of 220) had clinical evidence of impingement syndrome. Only 3 of the 11 patients (27%) had the diagnosis of impingement before the examination suggesting that the diagnosis was overlooked by the treating physician. The seatbelt supported shoulder was involved in 83% of the subjects. The authors conclude that a significant proportion of post whiplash patients have shoulder pain, some with a treatable pathology such as impingement syndrome. They note the diagnosis is frequently overlooked and the shoulder pain is often attributed to pain radiating from the neck by the treating physician. They also suggest that the shoulder harness is one possible explanation for the injury.

This is not the first paper to report on this. There was another article in the *Journal of Bone and Joint Surgery (85-B(3):408-410)* that found that 22% of 476 subjects had some shoulder pain with 9% (43/476) having an impingement syndrome. These findings seem somewhat comparable to the newer study.

The study provokes some interesting thoughts. Why is the shoulder diagnosis so often overlooked? I would suggest it is because the wrong doctors are evaluating the patients. Most patients are seen by ER physicians and then their primary care doctor. Neither of these entry level physicians have much training in musculoskeletal diagnosis. If they see a neurologist, the physician is likely to support the referred pain diagnosis rather than the shoulder as the primary pathology. I would hope that an orthopedist, physiatrist or chiropractor would look to the shoulder as a potential primary etiology. Remember the old saying, “When you’re a hammer everything is a nail”. Be careful that your clients/patients aren’t being pigeon holed by the treating doctor due to training or philosophical bias.



A MEDICAL-LEGAL NEWSLETTER FOR PERSONAL INJURY ATTORNEYS BY DR. STEVEN W. SHAW

What about the potential injury mechanism for the shoulder pain or impingement? This study suggests that the shoulder harness is an etiologic factor, but how? One theory suggests that the seatbelt serves as a fulcrum resulting in excessive stretch or compression of the articular and periarticular structures (ie. Capsule, bursa, tendons, ligaments, labrum, bone, nerve, muscle). Another theory suggests that the closed kinetic chain from the steering wheel through the hand, wrist, forearm, arm and shoulder result in a compression or jamming of the related structures. Yet another theory considers that the glenohumeral joint is poorly supported, thus allowing for sheer forces (translational forces) which may damage the joint related structures. All are plausible explanations which would require further investigation.

This study should alert doctors and lawyers to the potential of primary shoulder injuries that may be overlooked or attributed to other causative factors. Patients/clients should be questioned about shoulder complaints and appropriate examinations performed. When suspected by clinical exam, musculoskeletal ultrasound imaging may be a cost effective method of screening before expensive MRI imaging is performed.

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