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## Physicians' Medical/Legal Consultants of Texas, LLC

Physicians Helping Attorneys Helping People™  
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### Newsletter

February 2023

## Low Speed Collisions Resulting in Injury

### This Month's Question

Defense experts commonly opine that forces encountered in low-speed collisions are insufficient to cause serious injury. Can you comment on this?

### Our Response

On the contrary, there is ample evidence in medical practice, backed by credible literature that indicates collisions at speeds as low as 6 mph can do much harm to the human body.

One such example involves the cause of thoracic outlet syndrome (TOS). Medical literature notes TOS to be a combination of neck or shoulder trauma plus an anatomic predisposition.

Neck or shoulder trauma (like auto accidents) as a causative factor of TOS resulted from observations reported by a **few thousand** patients whose symptoms of pain in their necks and arms as well as numbness in their hands developed soon after a motor vehicle crash. This observation was followed by studies that demonstrated significant cell changes in the neck and back muscles of patients with TOS.

Congenital bands and ligaments are observed in a large majority of TOS patients. Several different kinds of bands have been recognized and categorized. These bands and ligaments are present since birth. In patients with TOS, they become associated with

symptoms following trauma – even minor trauma. The anatomic findings are, therefore, usually regarded as a predisposing factor and not a causative agent.

One would assume that if the site of pathology in TOS is the scalene (tiny muscles in the neck) muscles, there should be abnormalities found in them. In fact, findings of muscle scarring have been found and reported in the medical literature.

Based on the above observations, namely a history of neck or shoulder trauma, variations in normal anatomy, and cell changes in scalene muscles one can readily explain the pathophysiology of TOS. The underlying pathology in most patients is scarring of the scalene muscles caused by shoulder or neck injuries. The tight scalene muscles cause neck pain and headaches, as well as TMJ symptoms, which usually develop within a few days of the crash. As scarring in the muscles develops, the muscles compress the brachial plexus, eliciting the symptoms of pain, numbness, and weakness of the upper extremity. The onset of extremity symptoms may be delayed a few days to weeks, and in some patients, even months – as it takes time for scar tissue to develop and compress. As the pathophysiology becomes established, scarring adds to the problem. These injuries set up a vicious cycle. Pain, bad posture, poor physical conditioning, and anxiety then aggravate that cycle.

In conclusion, the anatomic problems that lead to TOS are now well known and documented in the medical literature. They consist of congenital anomalies that are superimposed on some form of trauma – even trauma caused by low impact forces.

## **Let Us Know How We Can Help You**

- On and off-site review of case validity and value
- Help with strategies to promote medical theories
- Interpretation of meaning, or lack thereof, of medical reports & records
- Table-side deposition assistance
- Referral to appropriate expert medical witnesses
- Medical research
- Facilitation of communication with clients, families, professionals and service & governmental agencies

- Case Coordination-**New Service\*\***

**\*\***We've recently gotten a lot of feedback asking us to help with case coordination in cases valued at \$25,000-\$50,000. Typically, these cases shorter medical records and may only require 2-4 hours of our time. We often pick up medical issues not previously recognized that can add value, new theories and "game planning". We have purposefully **kept our fees low; a fraction of usual expert witness fees** to allow you to have us review these cases at the outset of your representation while controlling your expenses.

**Contact Us at [www.pmlctex.com](http://www.pmlctex.com) 281-705-6690**

**P.S. ---Please pass this Newsletter along to your colleagues if you found it helpful.**