

Functional Medicines' Point of View: Frozen Shoulder: The Diabetic Connection

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As chiropractic physicians, we must be observant of what may be called the "**not-so-obvious**" cause(s) of disease. In this short article, I want to present the clinical data and my experience between frozen shoulder (adhesive capsulitis) and diabetes. As a quick review, adhesive capsulitis is a syndrome defined in its purest sense as idiopathic painful restriction of shoulder movement that results in global restriction of the glenohumeral joint. It is not associated with a specific underlying condition. To avoid confusion, the term "adhesive capsulitis" should be used to refer to the primary idiopathic condition and the term "secondary adhesive capsulitis" should be applied to the condition that is associated with, or results from, other pathologic states. Prior to my involvement in functional medicine, I would filter most shoulder conditions through a mechanical lens. I would do the typical orthopedic and biomechanical evaluation and, in many cases, see favorable responses from my treatment. However, the mother of all shoulder problems, adhesive capsulitis, presented the biggest clinical challenge and, I bet, does for many chiropractic physicians.

Possible Non-Mechanical Causes of Secondary Frozen Shoulder (FS)

The conditions most commonly associated with idiopathic FS are **diabetes**, hypothyroidism/hyperthyroidism, hypertriglyceridemia, CVA with upper-extremity paresis, brachial plexus injury, cervical spinal cord injury, and Parkinson disease. This short discussion will focus on diabetes and its relationship to FS.

FACTS:

- The incidence of adhesive capsulitis is **two to four times higher** in diabetics than in the general population.

- The prevalence of diabetes in patients with adhesive capsulitis was 38.6%, whereby the total prevalence of a diabetic condition in patients with adhesive capsulitis was 71.5%
- Shoulder capsulitis is common in type I and type II diabetic patients. However, it is associated with age in type I and II diabetic patients and with the duration of diabetes in type I patients.

POSSIBLE ETIOLOGY

Diabetics have a higher incidence of frozen shoulder, probably because poor circulation leads to abnormal collagen repair and degenerative changes. The theory is that platelet derived growth factor is released from abnormal or ischemic blood vessels, which will then act as a stimulus to local myofibroblast proliferation. What follows has been proposed that microvascular disease, abnormalities of collagen repair and predisposition to infection may link diabetes with frozen shoulder.

The take away from this article is to be aware of these findings alerting you to the risk of diabetes in patients presenting with adhesive capsulitis of the shoulder.

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