Fascia Shear—A Model for Understanding the Origin of Myofascial Pain

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BACKGROUND Myofascial pain has been shown to be associated with various pain conditions from headache to foot pain. Pain from muscle and fascia is also associated with ropey bands of muscle, concentrated areas of myofascia called trigger points, and varied symptoms of radiating discomfort. Various injuries to muscle and fascia have been shown to lead to myofascial pain. Mechanisms of injury include repetitive strain and over-use, contusions, and sprain/strain. This hypothesis is that myofascial pain is caused by injury to muscle and fascia, and one of the primary sites of injury is to the enthesis of the particular ropey band.

METHODS This study was performed in two parts.

A. Physical examination looking for ropey bands and trigger points has been the hallmark of identifying and diagnosing myofascial pain. Just as physical examination can identify trigger points as differences in tissue texture, an injured enthesis can be identified by examination of texture and presence of localized tenderness. Patients with pain symptoms were examined for the presence of enthesis tenderness at the ends of painful ropey bands of myofascia.

B. The tender entheses at either or both ends of ropey bands in various parts of the body were treated with localized and discrete needle trauma and injection of the patient's own Platelet-rich Plasma.

RESULTS: With rare exception, treated areas of enthesis were less tender at 4 and 8 weeks. Concomitantly patients experienced improved function as demonstrated by increased range of motion and increased strength. Self reported myofascial pain also decreased.

CONCLUSION Identifying and treating myofascial pain has helped many people get out of pain where treatments of spine, disc, and nerve have had less favorable results. PRP treatment to encourage regeneration of an injured myofascial enthesis may reduce myofascial pain by reducing fascia shear forces in the ropey band. New understanding of anatomy of fascia, together with new technology that promotes fibroblast regeneration and fascia healing may have dramatic potential for reducing human suffering.

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