

Induced Thaw: Melting Frozen Tissue A Multidisciplinary Approach to Adhesions

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BACKGROUND Adhesions alter the architecture and adaptability of connective tissue. As fiber configuration becomes randomized and cellular hydration diminishes, adhesions become self-perpetuating, unavailable to classic manipulative therapies. We explored a multidisciplinary approach for reconfiguring fiber orientation using simultaneous bio-mechanical/bio-chemical interventions: Feldenkrais, Rolfing and intravenous glutathione.

METHODS Glutathione in sterile water was administered via slow IV push to twenty-two patients with adhesions resulting from surgery, trauma or frozen shoulder. Concurrently, tissue and joint mobilization techniques were applied by Feldenkrais and Rolfing practitioners. Restrictions were manually assessed and mapped prior and post treatment. Tissue mobilization was focused on affected area but not limited to region. Cell uptake of glutathione is a palpable event; uptake provides a permeability window of 18-24 minutes during which time the mobilizations were done. Glutathione dose was calibrated using parameters of liver function and tolerance. Variables: dose, addition of magnesium and potency fluctuations in glutathione.

RESULTS Used solely glutathione has a global anti-inflammatory/anti-oxidant action. We discovered that when used in conjunction with manual manipulation, glutathione can be focalized and become site specific. In this phase of the study 91% of the patients reported significant reduction in pain and increased mobility. Practitioners noted qualitative tissue changes: diminished tissue density, increased hydration, resilience and glide, along with measurable improvements in range of motion. Level of sustainability of tissue changes estimated at 60-80% six weeks after glutathione mobilization.

CONCLUSIONS These preliminary indications suggest that glutathione alters and enhances access to connective tissue adhesions. We speculate that there are multiple mechanisms at work: methylation and possible interruption of the NO cycle (nitric oxide). We continue to study the dynamics of membrane permeability as a manipulable event and continue to refine the protocol to maximize tissue changes that can be garnered during the brief window of permeability induced by the infusion of glutathione. The second phase of this study will be a two-tiered data collection focusing on frozen shoulder (Adhesive Capsulitis) and post-surgical adhesions.
