



Introduction to the Fascial Manipulation® model for case reports

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ABSTRACT

The Fascial Manipulation® method is a concept based on fascial anatomy and physiology. Based on research, the biomechanical model for internal dysfunctions offers possibilities for effective treatment of such ailments as: vulvodinia, constipation, urinary incontinence, chronic urogenital pain, painful intercourse, scars post surgical intervention and many more. For a comprehensive outline of FM treatment, it is necessary to take part in a FM course. This introduction is intended as general information for the two case studies that follow.

Keywords: Biomechanical model; catenary; center of coordination (CC); center of fusion (CF); densification; Fascial Manipulation; internal dysfunction

The Fascial Manipulation (FM) method was created by the Italian physiotherapist Luigi Stecco.¹ Initially, the method was used to treat dysfunctions of the musculoskeletal system by manipulation of points referred to as Centers of Coordination and Centers of Fusion.² Its application has been extended to internal dysfunction, which, it is hypothesized arises from densification of fascia at the superficial, deep, visceral, vascular and glandular fasciae. Any impediment to gliding between endofascial fibers and interfascial planes can cause anomalous tension, inflammation, dysfunction and pain or alteration in internal organs function.

The fundamental structure in FM is the myofascial unit. This unit is made up of muscle fibers, nerves, vessels, ground substance (the extracellular matrix of connective tissue) and fascia which connects all these components. FM acts most of all on the ground substance, which is pliable and modifiable,

when subjected to adequate pressure. Fasciae consist of adaptable elastic fibers, as well as inextensible collagen fibers. Elastic fibers can elongate and shorten only if they are immersed in a normal ground substance (i.e. not too viscous). If the consistency of the ground substance changes to being more viscous it gives rise to fascial ‘densification’, which is marked by the loss of fascial adaptability. Densification is mainly caused by overuse, trauma, cold and changes associated with metabolic syndromes. The most important ingredient that determines ground substance viscosity is hyaluronan. Depending on the strain to which it is subject, hyaluronan can become either more or less dense. If the hyaluronan assumes a more packed conformation, the loose connective tissue inside the fascia and underlying muscle is compromised, and this forms the basis of the common phenomenon known as “myofascial pain”.^{3,4} While

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densification of the fascia results from a modification of the fluid state of hyaluronan towards a more gel state, the frictioning produced by manipulation of the fascia can reverse this process through a local increase in tissue temperature. As the body part is manipulated, therapist commonly perceive a sudden improvement in tissue glide.⁵

With increased research on the structure, physiology and continuity of the fascial system, the concept of FM has expanded to incorporate a working model for the management of functional disorders of internal organs. This model is based on the civil engineering concepts of tensile structures, which closely correspond to the anatomy of the human trunk. There are two interconnected tensile structures which act on each other:

- An external tensile structure-consisting of four trunk cavities and head, including muscles and fascia: cp-caput, cl-column, th-thorax, lu-lumbi, pv-pelvi,
- An internal tensile structure-made of fascial structures which provide anchorage to internal organs and fascia which surrounds every single organ.

The main task of tensile structures is to maintain the correct vital space within the cavity that houses a particular organ apparatus. The terms “apparatus” refers to a group of organs that perform the same function, e.g. digestive or respiratory. Within each tensile structure we may distinguish three lines of tension: antero-posterior, lateral-lateral and oblique. The tensional balance of these lines is the basis for maintaining the correct shape of the body container and of the pressure inside each individual cavity. The fascial continuity of individual tensile structures (caput, collum, thorax, lumbi, pelvis) creates a trunk catenary labelled in the same manner as identified above. In order to maintain proper tension, these structures utilize the myofascial system of the trunk and limbs, which consist of proximal pivot points (shoulder and hip girdle) and distal anchoring elements called distal tensors (wrist and ankle). The role of proximal pivot points and distal tensors is to maintain and regulate tensional forces of the trunk. It means, that every alteration in the fascial system, irrespective of where it is, may have significant implications for the trunk wall, altering tension, pressure and affecting its adaptability to changing conditions, both in the internal and external soft tissue environment. According to the FM method there are four sequences consisting of two apparatuses in each sequence, except for the Receptor Sequence:

- Digestive and Respiratory Apparatuses (ADI & ARE) are part of Visceral Sequence (SE-VI),
- Urinary and Circulatory Apparatuses (AUN & ACI) are part of Vascular Sequence (SE-VA),
- Endocrine and Hematopoietic Apparatuses (AEN & AHE) are part of Glandular Sequence (SE-GL),
- Mechanoreceptor, Photoreceptor and Chemoreceptor Apparatuses (AMR, APR, ACR) are part of Receptor Sequence (SE-RC).

In the case of internal dysfunction, these systems play an important role. A System consists of anatomical structures extended along the body, which have a similar organization and are responsible for such functions as: metabolism, thermoregulation and immune reactions. Systems have two components, external and internal. The external part of the system is directly connected to the superficial fascia and the internal part is related to the internal fascia associated with the apparatus. The superficial fascia (an external part of the system) connects components such as: lymphatic vessels and nodes of the lymphatic-immune system (SLI), adipose tissue for adipose-metabolic system (SAM), glands for cutaneous-thermoregulation system (SCT) and receptors for neuro-psychogenic system. The internal part of the systems consists different apparatuses which play a role in immune defense, metabolic process, thermoregulation and responses to environmental changes. Prevertebral and paravertebral ganglia are used to connect the external part of the system (superficial fascia) with the internal part of the system (internal fascia of apparatuses).⁴

FM treatment requires in clinic movement and palpatory verification, to identify the catenary that requires treatment and interferes with internal motility. During palpation the therapist’s aim is to find the most altered line of tension by palpating points on the trunk, shoulder and hip girdle (pivot points) and in the distal segments of the limbs (distal tensors). As far as superficial fascia treatment is concerned, the human body is divided into quadrants: antero-medial, antero-lateral, postero-medial and postero-lateral. Each system requires a specific manual technique for palpation and treatment. For superficial fascia therapist use palpations of the quadrants of the superficial fascia in order to identify “attractor points”.

The term “attractor” signifies a compressed point (or area of attraction) within a quadrant that, as it densifies, tends to compensate itself by attracting the nearby skin retinaculum structures. Depending on the assessment and any alterations identified in the superficial fascia, a particular technique is chosen, either mobilization–SLI, pinching–SAM, or scratching–

SCT. For each sequence and system there is a particular protocol used depending on the outcome of palpatory verification.^{4,6}

FM acts on the peripheral systems according to certain principles. Fascial therapist does not attempt to substitute the lymphatic deficit with drainage, or the circulatory lymphatic deficit of the adipose tissue with massage, or the neurological deficit with stretch. Instead, fascial therapist frees the compressed lymphatic vessels, stimulates the retinacula of the adipose tissue and manipulates the fascia that is compressing a peripheral nerve. In order to free a lymphatic vessel or a compressed nerve, fascial therapist acts in the quadrant that is proximal to the area of deficit. For dysfunctions that tend to imitate an internal organ disorder and are localized in one segment of the trunk, manipulation of some points on the tensors of trunk wall is proposed. This proposal is based on an engineering principle related to tensile structures. For dysfunction of the apparatus (i.e. urogenital), therapists work along the catenaries of the trunk (lines of tension) and the tensors of the limbs. FM uses the same points that correspond to acupuncture points.

Almost all acupuncture points are indicated for both musculoskeletal and internal dysfunctions. The difference between acupuncture and FM lies in the way that the points are stimulated and in the combination of the points that are used. Moreover, different manual approaches are used to stimulate points, or small areas, based on the principle that fascia is the only pliable and malleable tissue in our body. What is also worth mentioning is the fact that, fascia interacts with muscle spindles within the musculoskeletal system, and it also interacts with neuronal network of the internal organs, which is possible on account of fascial elasticity, fluidity and correct basal dimension.

For more comprehensive outline of FM treatment, it is necessary to take part in a FM course. This introduction is intended as general information for the two case studies that follow (Diagram 1).

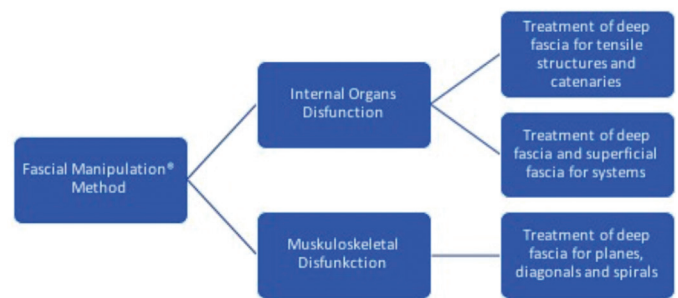


Diagram 1. Fascial Manipulation treatment organization

DISCLOSURES

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