

The Rehabilitation of Sports Muscle and Tendon Injuries

MYOFASCIAL MASSAGE

Alessandro Salsi

Education & Research Department Isokinetic, Bologna, Italy

Introduction

The myofascial massage is indicated for the treatment of all the muscular injuries from indirect trauma, the degenerative tendinopathologies, the scar tissue with fibrosys and the interfascia adhesions. In these pathologies, the traumatic action induces an alteration of the cellular components of the tissues, with consequent defensive reaction which translates into the inflammatory process. In the overload injuries, the reaction of the tissue assumes a much minor importance and the symptomatology is characterized above all from the pain that can be of variable degree, spontaneous or provoked from functional stimulations. Moreover the pain can limit the patient's movement and performance because the behaviour of the fascia changes, reducing its elasticity and capacity of self defence. The immobility of the connective tissue provokes a progressive loss of water content and a reduction of the glycosaminoglycans. These modifications cause a hardening of the fundamental substance with reduction of the critical distance between the collagen fibres and modification of the sliding capacity of the tissue that produces pathological friction and consequent thickening of the tissue.

Effects of myofascial massage

The myofascial massage have the same the physiological effects of traditional massage through a direct mechanical action and an indirect or reflex action. The direct action involves the underlying structures beneath the treated area (blood vessels, nervous terminations, connective tissue). An increase of blood flow can be observed with consequent increased wasting of catabolic products. Furthermore this technique helps the affected tissue to regain elasticity and fluency, modifying the perception of rigidity and of pain in the area.

Technique

The technique of myofascial massage is characterized from five phases.

Phase 1: evaluation. The physical therapist must know the clinical history of the patient. Pain is estimated applying the VAS scale, and also the range of motion of several joints, trying to isolate the movement that evokes pain. Palpation of the soft tissues is done always testing the healthy limb first. Evaluation must be performed constantly and any improvement must always be emphasized to the patient.

Phase 2: warm-up. It starts with 5-10 minutes of traditional massage with drainage, kneading and light friction manoeuvres. The objective of this phase is to increase blood and lymphatic flow, diminishing the excitability of the nervous endings and favouring the disposal of catabolites.

Phase 3: digital pressure of the hurting points. The approach must be gradual because if the connective tissue is "assaulted" it hardens. The hand is supported on the zone that hurts, then a light pressure is produced with the fingers that is maintained for about 7 seconds. The physiotherapist tries to perceive the reactions of the zone subjected to pressure that can answer by hardening or yielding. If the pain diminishes as a result of the digital pressure, the district can be manually treated; if the pain increases the zone is still strongly inflamed and the manual treatment must temporary be avoided.

Phase 4: passive manipulation. It consists in a series of manoeuvres of take-traction-ungluing of the soft tissues so that they can be exercised superficially and deeply. The aim of the superficial manoeuvres is to make the superficial plains compromised between the derma slide and unglue. In the deep manoeuvres it is attempted to separate and to make slide the muscle and unglue from the periosteum. Manual actions are applied transevsrally regarding the direction of the muscle; the movements will be shorter and slower in proportion to the pain and resistance of the tissue.

Phase 5: active manipulation. This phase is the most important and is inserted in the global treatment in a second moment. The massage favours the separation and the mobilization of the tissues that have formed the adherences. It is called active because the patient is actively involved in performing an active muscle contraction while the physiotherapist performs the mobilization pushing in a transversal direction with respect to the muscle's direction. The active manipulation does not have to be exaggerated in terms of pressure and time because local inflammation could be evoked. It would be therefore important to execute this type of manipulation on alternate days.



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Conclusions

Myofascial massage is not to be intended like an universal remedy, and is indicated in particular situations and pathologies of the soft tissues. It is a technique that, associated to other methods, gives optimal results on the joint and muscle components. It is easily applied to all muscle districts, occupies less work time and betters the relationship between physiotherapist and patient which is actively involved during the manipulation.