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MIOFACSIAL TECHNIQUES FOR IMPACT ON M. ERECTOR SPINAE WITH A SET OF HEALING MASSAGE TOOLS

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Abstract: In fact м. erector spinae is a large muscle group of the torso and spine. In order to influence it, the therapists must know the anatomical features. We chose a patient's position for the therapeutical approaches performance. A plan for localization of trigger points is used. Myofascial techniques are combined with manual approaches performed thanks to a set of healing massage tools. In this way, the spine extension from the cranium to the sacrum is activated. M.erector spinae (m.e.s.) is part of the deep muscles of dorsal origin (autochthonous) muscle groups of the torso and spine. It is the strongest muscle and is located along the entire length of the spine. It is separated into three muscles - m.spinalis, m. longisimus et m.iliocastalis. M.e.s. is actually composed by nine muscles. In spine movements, it is often not possible to isolate a particular muscle in a particular movement. Long back muscles lie under the broad ones and are covered with thick fascia. It is difficult to get an impact on them. They are in the form of two rollers on both sides of the spine and are located from the nape to the waist. All the muscles are attached to the vertebrae and the ribs. From the morphological localization of the muscle group is visible, that m.e.s., which is laterally situated to m.multifidi. M.iliocostalis lumborum (m.i.l.) is located above m.quadratus lumborum. M.longissimus (m.l.) is the medial ending of м.i.l.. the trigger point of m.i.l. is located in the lower part of the torso. It causes primary symptoms such as pain from appendicitis, nausea, abdominal cramps, hip pain, abdominal swelling, sore-chest pain, lower back pain. Secondary symptoms are lumbar and glutaneous pain. There is a spread of pain to the lower back and to the gluteal muscles. We believe that in order to process the separate parts of the large extensor on the back, the morphological features must be strictly observed. We must first provide relaxation of the broad back muscles and then move on to massage techniques that will act at a greater depth. We are convinced that nothing can replace the healing massage in meeting the set therapeutic goals for the analytical relaxation of the determined muscle. If there is no contraindication for this therapeutic procedure, it should be included the kinesitherapeutic program.
Keywords: м. erector spinae, myofascial techniques

1. INTRODUCTION

M. erector spinae (m.e.s.) is part of the deep muscles of dorsal origin (autochthonous) muscle groups of the torso and spine. It is the strongest muscle and is located along the whole length of the spine. In order to influence it, the therapists should know the anatomical features.

M.e.s. is divided into three muscles:

- ✓ m.spinalis,
- ✓ m. longisimus
- ✓ m.iliocastalis.

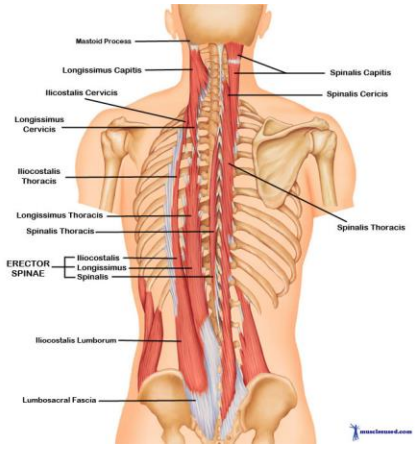

fig.1 Muscle group of m.erector spinae (m.spinalis, m.longissimus, m. iliocostalis)

M.e.s. is actually composed of nine muscles. In spinal column movements, it is often not possible to isolate a particular muscle in a particular movement (Dimitrova, 2008)..

Morphological analysis of lumbar muscle muscles.

Long back muscles lie under the broad and covered with thick fascia (Marinov, Staneva, 2017). They are hard hit on them. They are in the form of two rollers on both sides of the spine and are located from the nape to the waist. All the muscles are attached to the vertebrae and the ribs. These muscles are extensors on the back.

Figure 1 shows the morphological localization of the muscle group m.e.s which is lateral to m.multifidi. M.spinalis is a medial component, M.longissimus (m.l.) is an intermediate component, and M.liocostalis lumborum (m.i.l.) is located above m.quadratus lumborum and is a lateral component.

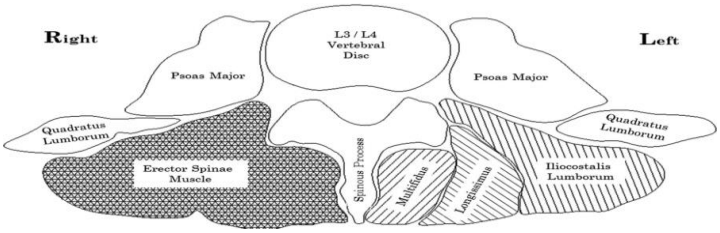

Fig.2 Morphological incision of the lumbar partition - the location of the three parts of m.e.s.

M.spinalis – (medial component m.e.s.) has two parts m.spinalis cervicis (m.s.c.) et m. spinalis thoracis (m.s.t.). Insertions of m.s.t. from processis spinose of Th10 or Th11 to those of Th3 or Th1-2 . M.s.c. starts from the lower part of ligamentum nuchae, the processis spinose of C6-7 or sometimes from Th1-2 inserted to the axe or C3-4.

M.longissimus - (intermediate component m.e.s). is the longest muscle on the back (table №1) the starting and ending locations of its three parts are shown: m. longissimus capitis, m. longissimus cervicis et m. longissimus thoracis (4).

Table №1 Starting and ending locations of m.longissimus

M.longissimus	Starting location	Ending locations
m.longissimus capitis	Напречни израстъци на Th1-5, артикуларни израстъци на C4/5-7	Processus mastoideus
m. longissimus cervicis	Напречни израстъци на Th1-5	Напречни израстъци на C2-6
m. longissimus thoracis.	Напречни израстъци на L1-5	Напречни израстъци на Th1-12, долните 9-10 ребро

Function of m.l.: Extension and backward inclination, for example, when looking directly over your head. Lateral flexion of the neck, inclination of the neck on both sides, such as when you tilt your head to one side of the body (for example, when you hear someone say something absurd). Backward inclination, such as when turning slightly. Lateral flexion on the back, tilt back to either side, for example when you bend to the right to stretch your left side

M.iliocostalis lumborum - (lateral component of m.e.s.) assists the extension of the torso and lateral flexion of the spine, maintains the posture, performs a lateral slope on the same side.

2. MATERIALS AND METHODS

Massage techniques applied on m.e.s.

Considering that m.e.s. is covered by the superficial muscles of the back We believe that the best effect on it is in the flat treatment of the trigger points with a healing massage tool (thumb saver) (5).

fig.3 Healing massage tool (thumb saver)

Trigger points in m.e.s. are detected by flat palpation. Very often they are active in scoliosis, kyphosis, a difference in the length of the limbs or visceral pathology. It is therefore necessary to make a differential diagnosis. The kinesitherapist locates the trigger point by placing a fist just below the lower corner of the blade and using thumb saver to compress the trigger point of m.iliocostalis thoracis.

Stretching m.e.s.

The stretching is performed in starting position long seating. The therapist places his palms and fingers on the neck area. The patient rotates and fills his torso by placing his upper limb on the opposite lower limb. Helping stretch the kinesitherapist puts his hands in the beginning and end of the muscle. Figure 3 shows the stretching of m.iliocostalis thoracis combined with a flat thumb compression of the trigger point with thumb saver (Fig. 4), thus the therapist avoids the trauma of the thumb that does not come into contact with the mass surface.

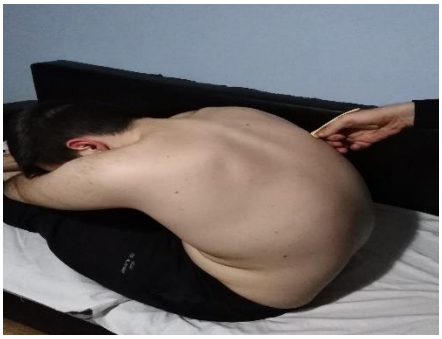

Fig.4 Stretching of m.iliocostalis thoracis with an impact on a trigger point

The muscles that are habitually stretched, outside the physiological state of relaxation tend to become weaker (reduced contractile ability). This condition is known as stretch-weakness (Popov, 2003). The muscles, which are habitually held in a shorten position, tend to lose their elasticity. These muscles exhibit normal contractile ability only in a shorten position, and when prolonged to a physiological state they exhibit weakness. This pathology is known as a risk of shortening.

3. CONCLUSION

We believe that after stretching and impact on trigger points there must be active movements for the target muscle. In order not to stick to the elementary vision of relaxation or stimulation of a muscle, but rather to aim for optimal functionality by the muscle groups.

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