IS THE SUPERFICIAL BACK LINE AN ANATOMICAL OR FUNCTIONAL STRUCTURE? Anatomical & clinical study.

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BACKGROUND: The superficial back line (SBL) is described as fascial structure that connects and interrelates the entire posterior surface of the body. The SBL can also consider as one of myofascial meridians with most clinical implications for its relation with the hamstring muscles. However, to our knowledge no studies have evaluated whether this chain is only a single anatomical structure or is also a functional entity

METHODS: The analysis involved two stages: a functional study followed by a cadaveric investigation.

FUNCTIONAL STUDY. Design: randomized controlled trial. Setting: Functional anatomy lab. Subjects and intervention: 25 volunteers took part in 5 trials of roller-massager rolling in one of the different regions that composes the SBL (plantar of the foot, calf, posterior zone of the thigh, lumbar and cervical spine) during 2 minutes. A group of five subjects also performed a control testing sessions with no rolling intervention. Hamstring flexibility was measured by a "sit and Reach" test before and after the intervention period.

ANTOMICAL STUDY. Design: a cross-sectional study. Setting: Dissection Laboratory. Subjects and intervention: 4 cadaveric donors (2 female, 2 male) designated for education or research, were studied by ultrasound and gross anatomical dissection. It was analysed the fascial connection of the SBL.

RESULTS– Functional study: An increase of the flexibility of hamstring was observed independently of the zone of SBL had been treated. But there was statistical improve of flexibility when the intervention was in the fascia of foot or calf. RESULTS– Anatomical study: The anatomical and ultrasound
findings showed a strongest fascial continuity between the fascia of plantar foot and the calf and between the calf and the posterior zone of the thigh. In the dissection procedure was observed a fascial connection between the hamstring muscles and adductor muscles of the thigh.

**CONCLUSION:** Superficial back line is an anatomical and functional entity with important and strong fascial connection in the lower part of this chain.