



## Treatment of shoulder myofascial trigger points in amateur athletes with Ergon® IASTM Therapy, cupping and ischaemic pressure techniques: a randomized controlled clinical trial

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**Introduction and Aims.** Myofascial trigger points (MTrPs) can be seen in the setting or athletic injury due to functional asymmetries, postural alterations, or secondary to repetitive injury and training overloading and are thought to be involved in several musculoskeletal pathologies in athletes.<sup>1</sup> Based on the above, this study examined the effectiveness of Ergon® Instrument-assisted soft tissue mobilization technique (Ergon© Technique),<sup>2</sup> of cupping therapy, and of ischaemic pressure technique in the treatment of active myofascial Trigger-points (MTrPs) at the shoulder region of amateur soccer players.

**Methods:** Fifty-five (55) amateur soccer players (age=24.4 ± 4.39; height=176.78 ± 8.31 cm; weight=75.16 ± 11.21 kg) were evaluated for the presence of shoulder (levator scapulae, infraspinatus, and trapezius) active MTrPs and were divided into 3 subgroups. The first group (N=20) was treated with Ergon-IASTM Technique®, the second (N=20) with cupping therapy and the third group (N=20) with ischaemic pressure. Ten (10) players received no treatment and served as controls. All athletes received one (1) treatment per week for three (3) weeks. Outcome measures were MTrPs pain pressure threshold (PPT) and pain sensitivity (VAS).

**Results:** All three therapeutic techniques led to a significant ( $p < 0.05$ ) reduction in MTrPs pain sensitivity and an increase in PPT compared with controls. These therapeutic adaptations were evident even from the first treatment ( $p < 0.05$ ) and reinforced by the end of the third treatment ( $p < 0.001$ ). The Ergon®-IASTM Technique and ischaemic pressure technique produced a significantly larger effect ( $p < 0.05$ ) in the reduction of pain compared with cupping therapy after the 2nd treatment. No significant difference ( $p > 0.05$ ) was observed between Ergon®-IASTM Technique and ischaemic pressure technique for their impact on MTrPs after the first two therapeutic interventions. A significant better effect of Ergon®-IASTM Technique on trapezoid MTrPs PPT and VAS compared with both cupping therapy and the ischaemic pressure was evident after the 3rd treatment.

**Conclusions:** The Ergon® IASTM and ischaemic pressure techniques can serve as a first treatment option for sports physiotherapists when they manage shoulder MTrPs in amateur athletes. Evaluation of these techniques on more randomized control studies is necessary for securing firm conclusions regarding their effectiveness in myofascial trigger points rehabilitation.

## **References**

- 1 Gerwin RD. (2001) Classification, epidemiology, and natural history of myofascial pain syndrome. *Curr Pain Headache Rep* 5: 412-420.
2. Fousekis, K., Kounavi, E., Doriadis, S., Mylonas, K., & Kallistratos, E. (2016). The Effectiveness of Instrument-assisted Soft Tissue Mobilization Technique (Ergon Technique), Cupping and Ischaemic Pressure Techniques in the Treatment of Amateur Athletes' Myofascial Trigger Points. *J Nov Physiother S*, 3, 2.

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