

or not of plantar afferences inefficiency on unipedal stabilometric performance [1].

Method Eleven subjects with bilateral pelvic instability at the unipedal pelvic stability test (TSPU) [1] and with a right dominant foot were evaluated. Randomized measurements were performed in bipodal stance on force platform (Médicaptureurs®, Fusyo®, France) for 31.6 sec at 40 Hz and then in unipedal stance for 5 sec at 40 Hz on each foot, eyes open and eyes closed under three conditions:

- Control;
- BM®
- BMT®.

Repeated and factorial variance analyses were then carried out. The population was divided into two groups according to their Plantar Quotient (PQ) greater or less than 100 determined by the bipodal registrations [2].

Results Seven subjects showed a QP greater than 100 and 4 subjects a QP less than 100. The BM® and BMT® stimuli enhanced the Surface of the Centre of Pressure (CoP) on the right foot with eyes closed. Taking into account the QP, subjects with a QP greater than 100 were enhanced on the surface of the CoP with BMT® only. In this condition, both median bars (BM® and BMT®) enhanced the subjects if their QP was less than 100.

Conclusion This study on bilateral pelvic instabilities with thin plantar stimuli confirms their therapeutic interest in these dysfunctions of postural control and illustrates fundamental interest of two notions:

- foot dominance and;
- efficiency or inefficiency of plantar afferences.

These results require further research that considers these intra and inter individual differences.

Keywords Inter individual differences; Pelvic instability; Stabilometry

Disclosure of interest The authors declare that they have no competing interest.

Références

- [1] Foisy A, Kapoula Z. Plantar Exteroceptive Inefficiency causes an asynergic use of plantar and visual afferents for postural control: Best means of remediation. *Brain Behav* 2017;7:e00658.
- [2] Villeneuve P, Recoules S, Declercq AC, Rouchon ME, Weber B. Une relation entre instabilité posturale et dyslexie de développement: le test clinique de stabilité pelvienne en unipodal. *Revue Ostéopathie* 2017;19:11–20.

Further reading

Dujols A. Quotient plantaire et conflit visuo-podal. *Agressologie* 1991;32:192-4.

<https://doi.org/10.1016/j.neucli.2019.01.031>

26

Complementarity of medical care and posturology in the management of Fibromyalgia Syndrome



Frédéric Viseux^{a,b,*}, Pascal Charpentier^a, Antoine Lemaire^a

^a Centre d'évaluation et de traitement de la douleur (CETD), Centre hospitalier de Valenciennes, 59322 Valenciennes, France

^b Posture Lab, 20, rue du Rendez-vous, 75012 Paris, France

* Corresponding author.

E-mail address: viseux-f@ch-valenciennes.fr (F. Viseux)

Fibromyalgia Syndrome (FMS) is a chronic and multi-faceted disease with an unknown aetiology. Clinical symptoms consisting of widespread pain, generalized muscular hypertonia, fatigue, sleep disturbances, impaired cognition and poor physical fitness compromise the autonomy, function and independence of these patients [1]. Postural control is affected and balance is impaired, leading to a greater risk and frequency of falls [2]. Pain in FMS may be associated with hyperexcitability of the nociceptive system and reduced opponent non nociceptive sensory process [3]. Although the pathophysiology of pain is unclear, an involvement of the thinly myelinated A δ and the unmyelinated C-nerve fibers has been reported. An abnormal peripheral C nociceptor ongoing activity and increased mechanical sensitivity could contribute to the pain and tenderness suffered by patients with FMS. Routine engagement in physical exercise is strongly recommended for pain management in musculoskeletal conditions such as FMS. Adherence to exercise in patients with FMS is poor and the majority of them are sedentary. Prolonged sedentary behaviour may contribute to physical deconditioning and a loss of confidence in one's ability to participate in physical activity, which reinforces the cycle of pain and disability. Understanding the factors involved in pain mechanism and postural control is important to maximize therapeutic intervention effectiveness. In this context, posturologist could implement new evaluation and procedural strategies for patients with FMS. Through the evaluation of muscular hypertonia and the quantification of stabilometric parameters, posturology offers a complementary systemic approach in the management of FMS. A precise clinical investigation allows a therapeutic strategy closer the aetiology of postural disorders and pain, which combines plantar neuro-stimulation and manual neuro-sensory therapy. In this context, posturologist brings perspectives in the management of patients with FMS, complementing medical care.

Keywords Fibromyalgia Syndrome; Neurosensory therapy; Posturology

Disclosure of interest The authors declare that they have no competing interest.

Références

- [1] Cerón-Lorente L, Valenza MC, Pérez-Mármol JM, García-Ríos MDC, Castro-Sánchez AM, Aguilar-Ferrández ME. The influence of balance, physical disability, strength, mechanosensitivity and spinal mobility on physical activity at home, work and leisure time in women with fibromyalgia. *Clin Biomech (Bristol, Avon)* 2018;60:157–63.
- [2] Jones KD, Horak FB, Winters-Stone K, Irvine JM, Bennett RM. Fibromyalgia is associated with impaired balance and falls. *J Clin Rheumatol* 2009;15:16–21.
- [3] López-Solà M, Woo CW, Pujol J, Deus J, Harrison BJ, Monfort J, et al. Towards a neurophysiological signature for fibromyalgia. *Pain* 2017;158:34–47.

<https://doi.org/10.1016/j.neucli.2019.01.032>