

## Letter

# Fibromyalgia and sleep-disordered breathing: the missing link

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Recently, Martinez-Lavin [1] proposed a model of sympathetically maintained neuropathic pain syndrome that has the merit of scrutinizing possible mechanisms behind the central sensitization model [2]. Eisinger [3], in an editorial comment, raises the issue of heterogeneity permeating Martinez-Lavin's proposition. Since it is difficult to establish a traumatic trigger event in all cases, Eisinger considers multicausality as more reasonable than a single post-traumatic etiology for all cases. Félix and Fontenele [4] further explored this venue, speculating that the orthostatic intolerance symptoms seen in the majority of fibromyalgia patients are a consequence of sympathetic hyperactivity. The idea that a COMT *val-158-met* polymorphism may cause higher catecholamine levels has been explored [5]. Loevinger and colleagues [6] have shown that the metabolic syndrome is more common in individuals with fibromyalgia who also have higher body mass index, blood pressure, and waist-to-hip ratio than controls.

Interestingly, elevated body mass index, blood pressure, and waist-to-hip ratio are associated with sleep-disordered breathing. We recently reported in a study that 50% of the women with obstructive sleep apnea syndrome or upper airway resistance syndrome had chronic pain and more than 11 tender points when pressed with 4 kgf/cm<sup>2</sup> [7]. Guilleminault and colleagues [8] reported orthostatic intolerance in patients with upper airway resistance syndrome. We believe that the authors investigating this theme should discuss the possibility of sleep-disordered breathing being the missing link between fibromyalgia, pain, disturbed sleep, alpha-delta sleep, hypotension, sympathetic hyperactivity, and metabolic syndrome.

We are conducting investigations into whether exposition to the typical stress of sleep-disordered breathing - with repeated arousal episodes and hypoxemia - has fibromyalgia

as a possible outcome. Our preliminary results underline the need to consider and further explore this hypothesis.

## Competing interests

The authors declare that they have no competing interests.

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