

RELATION BETWEEN NERVE FIBER TYPE LESION AND NEURODYNAMIC TESTS IN PATIENTS WITH LUMBOSACRAL RADICULAR PAIN

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I. INTRODUCTION

Lumbosacral radicular pain (LRP) is an important health care burden with a prevalence ranging from 1.2 to 43%. Neurodynamic tests are frequently used for the physical examination of nerve related pain. Basalgia and al. reported that negative neurodynamic tests are correlated with pronounced small nerve fiber sensory deficit in patients suffering from median nerve compression (1). Nonetheless, such a correlation has never been studied yet regarding LRP.

II. METHODS

The study consisted of a single assessment session. In order to be included patients had to suffer from LRP associated with a positive slump test or a nerve dysfunction pointed out by means of muscle manual testing (nerve root corresponding myotome), tendon reflex examination (patellar and ankle) and/or clinical sensory testing (Figure 2). Six clinical test developed to evaluate small nerve fiber function were included in the clinical sensory testing.

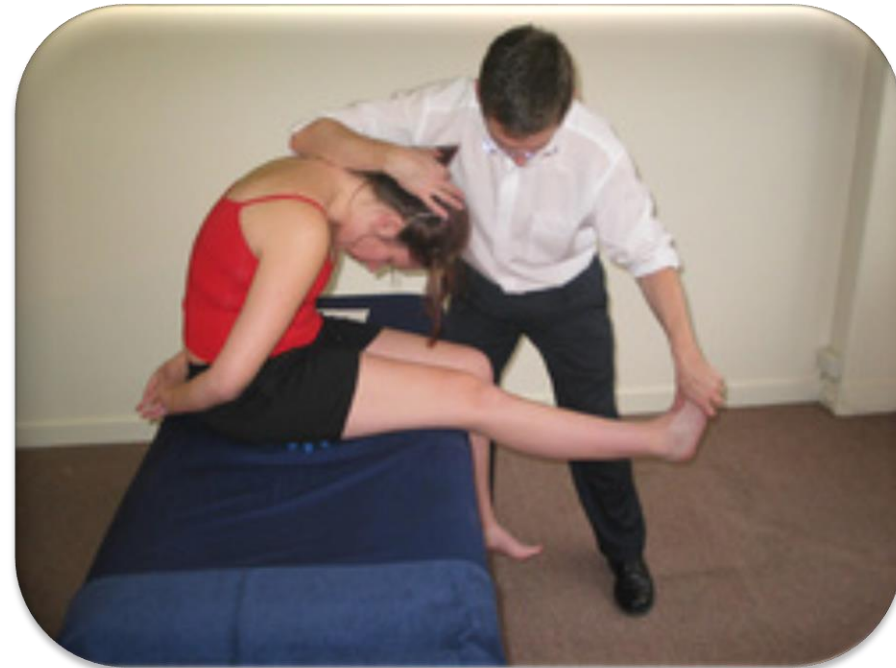


Figure 1 : Slump Test



Figure 2 : Clinical sensor testing, from Zhu, G. C. et al. Concurrent validity of a low-cost and time-efficient clinical sensory test battery to evaluate somatosensory dysfunction. *Eur. J. Pain (United Kingdom)* 23, 1826–1838 (2019)

III. RESULTS

Among the 8 patients recruited, 6 had a positive slump test and 7 presented at least one positive sensory test for the small nerve fibers (Figure 1). Patients presenting with a negative slump test did not have a greater small nerve fibers dysfunction than patients with a positive neurodynamic test. Furthermore no specific small nerve fibers type dysfunction was linked to a negative neurodynamic test.

	Positive small nerves fibers test	Slump test results
Patient 1	0/6	Positive
Patient 2	1/6	Positive
Patient 3	1/6	Positive
Patient 4	2/6	Negative
Patient 5	3/6	Positive
Patient 6	3/6	Negative
Patient 7	5/6	Positive
Patient 8	5/6	Positive

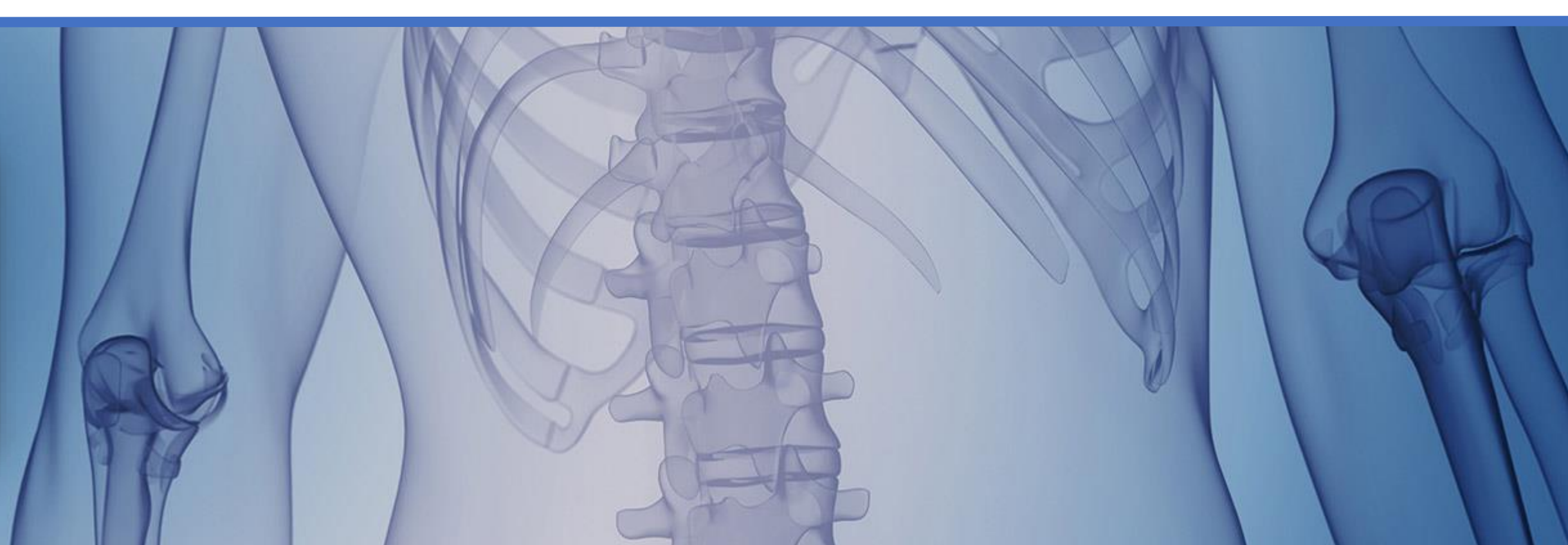
Figure 3 : Results of small nerve fibers tests and neurodynamic test in the 8 participants

IV. CONCLUSION

In this pilot study with patients suffering from LRP, negative neurodynamic tests did not appear to be associated with more small nerve fiber dysfunctions. However, considering the small sample size, these results need to be confirmed in further studies

REFERENCES

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