

Editorial

Alternative Effective Management of the Musculoskeletal Pain

Olena Plotkina, DC, MD^{1*}; Andrei Bourdeinyi, DC, MD, PhD²

¹Division of Clinical Sciences, Life University, Marietta, GA, USA

²Division of Basic Sciences, Life University, Marietta, GA, USA

*Corresponding author

Olena Plotkina, DC, MD

Assistant Professor, Division of Clinical Sciences, Life University, Marietta, GA, USA; E-mail: Olena.Plotkina@LIFE.edu

Article information

Received: February 7th, 2019; Accepted: February 11th, 2019; Published: February 20th, 2019

Cite this article

Plotkina O, Bourdeinyi A. Alternative effective management of the musculoskeletal pain. *Osteol Rheumatol Open J.* 2019; 2(1): e1-e3. doi: [10.17140/ORHOJ-2-e002](https://doi.org/10.17140/ORHOJ-2-e002)

There is a considerable amount of evidence regarding the effectiveness of high-velocity low amplitude (HVLA) manipulation on virtually all joints of the human body, both in the spine and extremities.¹⁻⁷ This type of manipulation therapy is also known as chiropractic, and is popular in the world, especially in the USA and Canada.⁸ However, in spite of this popularity and existence of many positive publications on this issue, our professional contacts and conversations with physicians, our attendance of various medical congresses, national and international, have shown us that the medical doctors have a quite poor notion about potentials of the HVLA manipulation and its position in the general health care system.

In this presentation, we would like to place attention on the effectiveness of HVLA manipulation in the treatment of the musculoskeletal pain throughout the body, but we will not focus on the spine, for which efficacy has already been established. The use of HVLA manipulation as an alternative approach for the management of musculoskeletal pain in the extremities is especially little known among medical doctors.

It is a common clinical situation for a physician to examine a patient with musculoskeletal pain and to not detect objective pathological findings in the area of complaint. It is difficult to understand why, but usually, a doctor automatically considers this pain as a manifestation of a “hidden” inflammation, even if the results of lab tests do not confirm that. It is well-known that the musculoskeletal pain could be potentially associated with various factors: pathology of visceral organs, tumors, infection, traumas etc.^{9,10} In other words, this pain could have a different nature, and not necessarily associated with inflammation. Strange as it may seem, but among other etiological factors, the musculoskeletal

pain very often is caused by just a slight misalignment of articular surfaces with respect to each other, which is known in medicine as subluxation. This misalignment is really slight and can be confirmed by special X-ray analysis techniques, or by a performance of the specific clinical examination. Based on common sense, the mechanical misalignments of articular surfaces should be corrected by their mechanical alignment (like while treating the major traumatic joint subluxations but more gently). And unlike to the latter, without the use of drugs, injections or surgical operations.

Based on the clinical experience and literature data, these slight subluxations (we would call them “microsubluxations” for distinguishing from the major traumatic subluxations) account for a number of serious clinical problems:

1. Pain or other impairment of the subluxated joint's function, such as restriction of its range of motion.^{6,7,11,12}
2. Reduction of muscle strength, often significantly so, around the subluxated joint. The alignment of its articular surfaces performed with the use of HVLA manipulative techniques leads not only to pain relief but to virtually immediate restoration of the strength in these muscles.¹²
3. Loss of the articular surface congruency, and therefore an increase of mechanical stresses on these surfaces, that is one of the known major factors promoting the progression of osteoarthritis.¹³
4. Impairment of the entire skeleton biomechanics resulting in uneven redistribution of the loading the musculoskeletal system, and eventually promoting the development of new microsubluxations, as well as development and progression of the degenerative joint diseases.¹⁴

Our clinical experience and data of the literature revealed that microsubluxations are responsible for the development of a number of serious clinical painful syndromes and diseases. Several examples are:

- a) Shoulder pain which is considered by physicians in the majority of cases to rotator cuff dysfunction, and for which surgery usually is recommended;^{12,15,16}
- b) Pain in forearm and wrist, as well as neurological disorders that produce numbness and tingling (for instance, in the carpal tunnel syndrome, although in reality the similar clinical manifestations could result from micro subluxation in elbow joint or cervical vertebrae, being not a problem of the carpal tunnel itself at all),¹⁷⁻¹⁹
- c) Low leg pain and foot drop,^{7,20}
- d) Calcaneal pain which is usually considered as a manifestation of achillobursitis or calcaneal spurs;²¹
- e) Temporomandibular joint pain. Temporomandibular micro subluxation frequently leads not only to temporomandibular joint (TMJ) pain but also to changes of the bite, which, in turn, could be followed by sometimes traumatic surgical interventions;^{22,23}
- f) Severe chest pain caused by misalignment of the ribs. This kind of microsubluxations frequently imitates angina pectoris attacks, or manifestations of degenerative disc disease, or is considered as intercostal neuralgia of unknown etiology. The typical medical diagnosis is “Undifferentiated Chest Pain”,²⁴⁻²⁷
- g) Hip and knee pain,^{6,12}
- h) Some frequent types of headaches (e.g. occipital headaches, or even migraine), which poorly respond to the analgesics,²⁸
- i) Lower abdominal pain, which is not associated with any visceral pathology.²⁹

A very important feature of micro subluxation is the relative ease of its diagnosis. It does not require the performance of expensive tests or expensive device exams and does not take much time. There is a high correlation between symptoms caused by microsubluxations and their locations that also facilitate the process of diagnosis.

A short summary of benefits associated with correction of microsubluxations:

1. Microsubluxations are perhaps one of the common causes of the musculoskeletal pain, muscle weakness, impairment of joint function, etc.
2. Microsubluxations usually are diagnosed relatively simpler and quicker, usually without the use of expensive equipment.
3. The correction of microsubluxations gives a possibility to reach the clinical improvement within a short period of time without drugs or surgery that excludes the development of their potential side-effects.
4. The regular correction of microsubluxations could lead to a restoration of the articular surface congruency, and thus supposedly to the prevention of the progression of the degenerative joint diseases.

ACKNOWLEDGEMENT

We would like to thank Professor Brent Russell from Life University for his help and recommendations in the process of preparation of this material.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES

1. Evans R, Bronfort G, Nelson B, Goldsmith CH. Two-year follow-up of a randomized clinical trial of spinal manipulation and two types of exercise for patients with chronic neck pain. *Spine (Phila Pa 1976)*. 2002; 27(21): 2383-2389. doi: 10.1097/01.BRS.0000030192.39326.FF
2. Enix DE, Sudkamp K., Malmstrom TK, Flaherty JH. A randomized controlled trial of chiropractic compared to physical therapy for chronic low back pain in community dwelling geriatric patients. *Top Integr Health Care*. 2015; 6(1).
3. Ghroubi S, Elleuch H, Baklouti S, Elleuch MH. Chronic low back pain and vertebral manipulation. *Ann Readapt Med Phys*. 2007; 50(7): 570-576. doi: 10.1016/j.annrmp.2007.02.012
4. Scholten-Peeters GG, Thoomes E, Konings S, et al. Is manipulative therapy more effective than sham manipulation in adults?: A systematic review and meta-analysis. *Chiropr Man Therap*. 2013; 21(1): 34. doi: 10.1186/2045-709X-21-34
5. Corcoran KL, Dunn AS, Formolo LR, Beehler GP. Chiropractic management for US female veterans with low back pain: A retrospective study of clinical outcomes. *J Manipulative Physiol Ther*. 2017; 40(8): 573-579. doi: 10.1016/j.jmpt.2017.07.001
6. Bourdeinyi A, Plotkina O. Hip pain: High effectiveness of manipulation therapy. Abstract, presenting in the 17th World Congress on Pain, Boston, USA, September 12-16, 2018; PFR323. Web site. <https://www.iaspworldcongressonpain.org/wp-content/uploads/2018/11/Program-Book-Final-only-posters.pdf>
7. Plotkina O, Bourdeinyi A. Common peroneal nerve entrapment: Amazing pain relief and recovery after manipulation on proximal fibular head. Case report. Abstract, presenting in the 17th World Congress on Pain, Boston, USA, September 12-16, 2018; PSN 273. Web site. <https://www.iaspworldcongressonpain.org/wp-content/uploads/2018/11/Program-Book-Final-only-posters.pdf>
8. Schneider M, Murphy D, Hartvigsen J. Spine care as a framework for the chiropractic identity. *J Chiropr Humanit*. 2006; 23(1): 14-21. doi: 10.1016/j.echu.2016.09.004
9. Sözen T, Başaran NÇ, Tınazlı M, Özişik L. Musculoskeletal problems in diabetes mellitus. *Eur J Rheumatol*. 2018; 5(4): 258-265. doi: 10.5152/eurjrheum.2018.18044

10. Perrot S, Cohen M, Barke A, Korwisi B, Rief W, Treede RD. The IASP classification of chronic pain for ICD-11: Chronic secondary musculoskeletal pain. *Pain*. 2019; 160(1): 77-82. doi: [10.1097/j.pain.0000000000001389](https://doi.org/10.1097/j.pain.0000000000001389)
11. Hawker GA. The assessment of musculoskeletal pain. *Clin Exp Rheumatol*. 2017; 35 Suppl 107(5): 8-12.
12. Battaglia PJ, D'Angelo K, Kettner NW. Posterior, lateral, and anterior hip pain due to musculoskeletal origin: A narrative literature review of history, physical examination, and diagnostic imaging. *J Chiropr Med*. 2016;15(4): 281-293. doi: [10.1016/j.jcm.2016.08.004](https://doi.org/10.1016/j.jcm.2016.08.004)
13. Bergmann T, Donahue T, Donahue S, Dody M. Manipulative assessment and treatment of the shoulder complex: Case reports. *J Chiropr Med*. 2003; 2(4): 145-152. doi: [10.1016/S0899-3467\(07\)60079-2](https://doi.org/10.1016/S0899-3467(07)60079-2)
14. Osteoarthritis. *Robbins and Cotran Pathologic Basis of Diseases*. Elsevier Saunders, 7th Edition, 1999: 1304-1305.
15. Steinmetz A, Seidel W, Muche B. Impairment of postural stabilization systems in musicians with playing-related musculoskeletal disorders. *J Manipulative Physiol Ther*. 2010; 33(8): 603-611. doi: [10.1016/j.jmpt.2010.08.006](https://doi.org/10.1016/j.jmpt.2010.08.006)
16. Dunning J, Mourad F, Giovannico G, Maselli F, Perreault T, Fernández-de-Las-Peñas C. Changes in shoulder pain and disability after thrust manipulation in subjects presenting with second and third rib syndrome. *J Manipulative Physiol Ther*. 2015; 38(6): 382-394. doi: [10.1016/j.jmpt.2015.06.008](https://doi.org/10.1016/j.jmpt.2015.06.008)
17. Gemmell H, Miller P, Jones-Harris A, Cook J, Rix J. An alternative approach to the diagnosis and management of non-specific shoulder pain with case examples. *Clin Chiropr*. 2011; 14(2): 38-45. doi: [10.1016/j.clch.2011.01.007](https://doi.org/10.1016/j.clch.2011.01.007)
18. Auyong S, Perez De Leon R. Chiropractic manipulative therapy of carpal tunnel syndrome. *J Chiropr Med*. 2002; 1(2): 75-78. doi: [10.1016/S0899-3467\(07\)60007-X](https://doi.org/10.1016/S0899-3467(07)60007-X)
19. Murphy J, Floyd R, Varnum C. Resolution of bilateral carpal tunnel syndrome following subluxation based chiropractic care: A case study. *Ann Vert Sublux Res*. 2014; 2014(4): 206-210.
20. Sergeant A, Boyle J, Moore A. Chiropractic management of a patient with insidious onset of foot drop. *Ann Vert Sublux Res*. 2017; 2017(1-2): 119-121.
21. Santos BD, Corrêa LA, Santos LT. Combination of hip strengthening and manipulative therapy for the treatment of plantar fasciitis: A case report. *J Chiropr Med*. 2016; 15(4): 310-313. doi: [10.1016/j.jcm.2016.08.001](https://doi.org/10.1016/j.jcm.2016.08.001)
22. Murphy MK, MacBarb RF, Wong ME, Athanasiou KA. Temporomandibular disorders: A re-evaluation, clinical management, and tissue engineering strategies. *Int J Oral Maxillofac Implants*. 2013; 28(6): e393-e414. doi: [10.11607/jomi.te20](https://doi.org/10.11607/jomi.te20)
23. Pavia S, Fischer R, Roy R. Chiropractic treatment of temporomandibular dysfunction: A retrospective case series. *J Chiropr Med*. 2015; 14(4): 279-284. doi: [10.1016/j.jcm.2015.08.005](https://doi.org/10.1016/j.jcm.2015.08.005)
24. Marks EM, Chambers JB, Russell V, Bryan L, Hunter MS. The rapid access chest pain clinic: Unmet distress and disability. *QJM*. 2014;107(6): 429-434. doi: [10.1093/qjmed/hcu009](https://doi.org/10.1093/qjmed/hcu009)
25. Stochkendahl MJ, Vach W, Hartvigsen J, et al. Reconstruction of the decision-making process in assessing musculoskeletal chest pain: An exploratory study using recursive partitioning. *J Manipulative Physiol Ther*. 2012; 35(3): 184-195. doi: [10.1016/j.jmpt.2012.01.009](https://doi.org/10.1016/j.jmpt.2012.01.009)
26. Lawrence DJ, Smith M, Rowell RM. Management of chest pain: Exploring the views and experiences of chiropractors and medical practitioners in a focus group interview. *Chiropr Osteopat*. 2005; 13(1): 18. doi: [10.1186/1746-1340-13-18](https://doi.org/10.1186/1746-1340-13-18)
27. Colloca CJ, Polkinghorn BS. Chiropractic management of chronic chest pain using mechanical force, manually assisted short-lever adjusting procedures. *J Manipulative Physiol Ther*. 2003; 26(2): 108-115. doi: [10.1067/mmt.2003.8](https://doi.org/10.1067/mmt.2003.8)
28. Racicki S, Gerwin S, Di Claudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: A systematic review. *J Man Manip Ther*. 2013; 21(2): 113-124. doi: [10.1179/2042618612Y.0000000025](https://doi.org/10.1179/2042618612Y.0000000025)
29. Mieritz RM, Thorhauge K, Forman A, Mieritz HB, Hartvigsen J, Christensen HW. Musculoskeletal dysfunction in patients with chronic pelvic pain: A preliminary survey. *J Manipulative Physiol Ther*. 2016; 39(9): 616-622. doi: [10.1016/j.jmpt.2016.09.003](https://doi.org/10.1016/j.jmpt.2016.09.003)