

Chiropractic manipulation techniques and nuances

Hasan Kerem Alptekin 

Bahçeşehir University Faculty of Health Sciences, Institute of Medical Sciences, Istanbul, Turkey

Received: July 23, 2020 **Accepted:** August 18, 2020 **Published online:** November 20, 2020

It was a great pleasure to notice a manuscript regarding chiropractic manipulation by Kültür et al.^[1] in your journal as the Director of the only Chiropractic Master of Science program in Turkey. However, there are some concerns of the technique used in that manuscript, as none of the writers had a degree of chiropractic.^[1]

Chiropractic manipulation (correction/adjustment) is a manual therapy modality applied by the controlled force on joints and adjacent tissues with the purpose of treating biomechanical disorders in the vertebrae and/or skeleton by mechanical maneuver. Chiropractors commonly use this modality to affect joints and their neurophysiological functions.^[2]

Chiropractic manipulation applied to the sacroiliac joint (SIJ) may have a direct effect on balance, as it contributes to the maintenance of joint symmetry. The primary objective of this study is, thus, to observe whether SIJ manipulation causes a significant change in balance and muscle strength.

The increased muscle activation after SIJ chiropractic high-velocity, low-amplitude (HVLA) manipulation helps improve the control of movement and the posture of the body, providing stability of the SIJ and lumbar spine. Manipulation of SIJ causes neuromuscular responses in the gluteus maximus, quadratus lumborum, and multifidus muscles. Thus, sensitization of SIJ nociceptive afferents affects the SIJ biomechanics through reflexogenic activation of the trunk and gluteal muscles.^[3]

It has been proven that chiropractic manipulations increase the stimulability of alpha motor neurons in the peripheral nervous system innervating the relevant muscles for 20 to 60 sec, increase the activity of corticospinal pathways, cerebellum, and sensorimotor areas in the cortex, and change motor activity of the SIJ and muscles surrounding the joint locally and remotely.^[4]

To date, many manipulation techniques have been defined for the SIJ. The literature review shows that a side posture (side-lying position) chiropractic HVLA technique yields the best results. In the side posture



Figure 1. Side posture (side-lying position) chiropractic high-velocity, low-amplitude technique. Compared to the side-lying position technique shown by Kültür et al.,^[1] there are some major differences. The main difference is that the hand pushed the sacroiliac joint is placed at the level of L4-L5 vertebra. Since the techniques of lumbar side-lying position technique and sacroiliac joint technique are very similar, the author may have manipulated the lumbar vertebra instead of sacroiliac joint as shown in Figure 2.

Corresponding author: Hasan Kerem Alptekin, MD. Bahçeşehir Üniversitesi Sağlık Bilimleri Fakültesi, Sağlık Bilimleri Enstitüsü, 34353 Beşiktaş, İstanbul, Türkiye.
e-mail: kalptekin79@hotmail.com

Cite this article as:

Alptekin HK. Chiropractic manipulation techniques and nuances. Turk J Phys Med Rehab 2020;66(4):497-498.



Figure 2. High-velocity, low-amplitude manipulation in sacroiliac joint dysfunction applied by Kültür et al.^[1]

technique (the lower leg is freely extended, while the upper leg is attached to the lower leg in knee and hip flexion), hypothenar part of the hand is used to push from the short leg over the posterior superior iliac spine toward the anterior to turn the ilium toward the anterior (Figure 1).

On the other hand, in the technique of Kültür et al.'s^[1] study, the patient was placed with a degree of 20 to 30 perpendicular to the table. As shown in

Figure 2, the classical side -lying position technique is performed with lateral decubitus position of the patient and a degree of 60 to 80 perpendicular to the table.

In conclusion, there are many studies showing that chiropractic HVLA manipulation is effective even in increasing the jump performance regarding SIJ problems.^[5] However, the important issue here is to select the most accepted chiropractic technique and apply it with correct maneuvers.

Declaration of conflicting interests

The author declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The author received no financial support for the research and/or authorship of this article.

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