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Chiropractic manipulative therapy on patients with lumbar facet tropism

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Facet Tropism (FT) is an embryologic and anatomical condition where articular facets has an asymmetrical angle between articular surfaces, affecting articular biomechanics, proprioception, muscle contraction, degenerative joint processes, scoliosis, disk herniation and even ligament laxity affecting ranges of motion. This study objective is to evaluate biomechanical changes in patients with FT treated with chiropractic manipulative therapy. A sample of 32 college students between 19 and 30 years old participates, 22 females (68.8%) and 10 males (31.3%). Lateral and AP lumbopelvic X-rays were taken before and after Chiropractic Treatment (CT). Changes in Ferguson Angle (FA), measured deficiency, bilateral ilium rotation, gravitational line were measured and analyzed. A 64.3% of FT was found in all zygapophysial joints. CT plan was used for all students, two times per week during a 4-week period. Radiological marking shows FT (64.3%) on 32 students. At the end of CT, a significant p value ≥ 0.05 for the FA (before 41.3 ± 6.0 and after 43.5 ± 6.0 $p \geq 0.02$). Symmetrical tendency was observed between both pelvic bones before treatment; right pelvic bone (210.6 ± 11.9) left pelvic bone (211.3 ± 13.9) with a difference of 0.6 mm. After CT right pelvic bone (211.3 ± 12.8) left pelvic bone (211.3 ± 13.9) with a difference of 0 mm. Regarding pelvic bone rotation before treatment, right pelvic bone (46.2 ± 6.7) left pelvic bone (45.7 ± 6.8) with a difference of 0.5 mm. After CT, right pelvic bone (45.6 ± 6.2) left pelvic bone (45.9 ± 7.5) with a difference of 0.3 mm. For the Sacrum Alae (SA) rotation before treatment, right SA (65.6 ± 5.0) and left SA (65.5 ± 6.1) with a difference of 0.1 mm and after CT, right SA (65.3 ± 6.5) and left SA (65.1 ± 5.4) with a difference of 0.2 mm. Chiropractic manipulative therapies modifies spine biomechanics where lumbar FT was found, by this we propose CT has a positive impact over biomechanical dysfunctions of the spine.

Biography

Juan Jose Saldaña Mena has completed her Master's degree in Education and is currently the Professor of the Universidad Estatal del Valle de Ecatepec, Mexico.

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