Nonspecific low back pain

Nonspecific low back pain (NSLBP) is a term used to describe low back pain of unknown origin with no identifiable generators. Over a decade ago, it was reported to account for about 85% of all cases of low back pain, although there is some doubt about the frequency.

The purpose of a study of Yamashita et al. was to determine the frequency of NSLBP in adolescent athletes diagnosed by general orthopedic surgeons and by spine surgeons.

A total of 69 adolescent athletes consulted our sports spine clinic to seek a second opinion for low back pain. Data on age, sex, type of sport played, the previous diagnosis made by general orthopedic surgeons, and the final diagnosis made by spine surgeons were collected retrospectively from medical records.

The frequency of NSLBP diagnosed by general orthopedic surgeons was 18.9% and decreased to 1.4% after careful imaging and functional nerve block examination by spine surgeons. The final diagnoses made by spine surgeons for those patients previously diagnosed as having NSLBP by general orthopedic surgeons were as follows: early-stage lumbar spondylolysis, discogenic low back pain, facet joint arthritis, lumbar disc herniation, and lumbar apophyseal ring fracture.

In adolescent athletes, the rate of NSLBP diagnosed by general orthopedic surgeons decreased markedly when the diagnosis was made by spine surgeons. A thorough medical interview, careful physical examination, appropriate diagnostic imaging, and selective nerve block examination can effectively identify the cause of low back pain [1)].

Treatment

A specific pilot study aimed to compare the efficacy of manual pressure release (MPR), strain counterstrain (SCS), and integrated neuromuscular inhibition technique (INIT) in the management of chronic nonspecific low back pain (LBP). Design: Single-blind, randomized, controlled pilot trial. Setting: Neurosurgery clinic. Subjects: Forty-eight patients (46 women; mean age, 35.47 ± 10.58 years) diagnosed chronic nonspecific LBP and who had at least one active myofascial trigger point (MTrP) in the quadratus lumborum, iliocostalis lumborum, gluteus maximus, gluteus medius, and gluteus minimus muscles were included. Interventions: Patients received a standard home exercise program in addition to the MPR technique (MPR group), SCS technique (SCS group), and INIT (INIT group) for 12 sessions (2 days/week for 6 weeks). Outcome measures: The primary outcome was the visual analog scale (VAS). The secondary outcomes were MTrP examination, pressure pain threshold, lumbar active range of motion, Oswestry Disability Index (ODI), Beck depression inventory, and state-trait anxiety inventory. Results: There is no significant difference in terms of the percentage of deactivated MTrPs after 1st session and 12th session between groups ($p > 0.05$), but the percentage of deactivated MTrPs was less in MPR group than other groups. The overall group-by-time interaction for the repeated measures analysis of variance was not significant for primary and secondary outcomes ($p > 0.05$), but the improvement in the VAS-activity and the ODI was slightly better in the SCS group compared with other groups. Conclusions: These preliminary findings, which might help provide a glimpse into the clinical effectiveness of three manual therapy techniques (MPR, SCS, and INIT) rather than statistical significance, indicated that SCS or INIT might provide slightly better improvement in pain during activity, deactivation of MTrPs, and disability related to pain in chronic nonspecific LBP [2)].

1)
Yamashita K, Sakai T, Takata Y, Tezuka F, Manabe H, Morimoto M, Kinoshita Y, Yonezu H, Chikawa T, Mase Y, Sairyo K. Low Back Pain in Adolescent Athletes: Comparison of Diagnoses Made by General Orthopedic Surgeons and Spine Surgeons. Int J Spine Surg. 2019 Apr 30;13(2):178-185. doi: 10.14444/6024. eCollection 2019 Apr. PubMed PMID: 31131218; PubMed Central PMCID: PMC6510183.
2)
Dayanır IO, Birinci T, Kaya Mutlu E, Akcetin MA, Akdemir AO. Comparison of Three Manual Therapy Techniques as Trigger Point Therapy for Chronic Nonspecific Low Back Pain: A Randomized Controlled Pilot Trial. J Altern Complement Med. 2020 Feb 5. doi: 10.1089/acm.2019.0435. [Epub ahead of print] PubMed PMID: 32023423.