

## Editorial

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# Low back pain: Old concepts and new insights

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Low back pain (LBP) is a musculoskeletal pathological condition affecting 540 million people and is considered the leading cause of disability not only in older people but also in the adult population [1].

Albeit the term LBP seems to define a symptom, it is widely used to represent a complex disease due to defined causes (e.g. osteoporotic fractures, lumbar disc herniations) or considered a non-specific medical condition [2,3].

LBP requires a multidisciplinary management including lifestyle modification, educational and behavioral therapy, pharmacological treatment, physical exercise, physical agent modalities, oxygen-ozone therapy, and other rehabilitative approaches [4].

In this context, the *Journal of Back and Musculoskeletal Rehabilitation* (JBMR) is particularly active in proposing new insights regarding LBP and providing the most updated scientific literature. This issue of JBMR presents studies considering different diagnostic tools and therapeutic approaches to reduce LBP.

To date, even though LBP is a musculoskeletal disorder commonly diagnosed in clinical practice, the recent literature has been investigating a precise assessment tool that might guide physicians in the optimization and modulations of specific therapy prescriptions [5].

In this context, the Istanbul Low Back Pain Disability Index (ILBPDI) has been recently introduced for the LBP assessment to deeply characterize the disability of patients suffering from LBP. Sencan et al. [6] have investigated the validity and reliability of ILBPDI to assess patients with lumbosacral radiculopathy, report-

ing potential implications in the clinical setting. This novel tool could promote a better characterization of physical functioning, bodily pain, general health, and social function of patients with radicular pain to closely monitor the treatment proposed.

Intriguingly, recent advances have also been obtained in terms of LBP treatment, as recently reported by Sucuoğlu and Soydaş [7], whose paper I have selected as the Editor’s Choice article and has thus been made freely available in this issue. In their double-blind randomized controlled trial (RCT), the authors assessed the effects of paravertebral oxygen-ozone therapy as an add-on to conventional therapy in patients suffering from acute lumbar disc herniation. There were significant differences between the experimental group and control group after 4 weeks of treatment, suggesting positive effects of the oxygen-ozone therapy administered 2 times/week for 4 weeks at concentrations of 20–25 µg/ml in LBP patients. These findings are in line with a recent systematic review on the role of oxygen-ozone therapy for musculoskeletal disorders [8].

Besides the advances in mini-invasive rehabilitative techniques, novel combined conservative approaches have been reported by Kim et al. [9]. The authors recently assessed the effects of transcutaneous electrical nerve stimulation and instrument-assisted soft tissue mobilization in the treatment of chronic LBP. It has been shown a positive short-term effect of the combined treatments in terms of pain reduction and functioning improvement when compared to control group, supporting the evidence on a comprehensive rehabilitation intervention for LBP patients [4].

It should be noted that lifestyle education might play a key role in the management of LBP [4]. In this scenario, the recent study by Shimo et al. [10] evaluated the efficacy of workplace counseling on physical activity and LBP. In this recent pilot RCT, the authors reported a significant improvement in activity levels after 12 weeks from the counseling intervention, with intriguing long-term findings after 6 months in terms of LBP severity only in the intervention group.

In contrast, a targeted and structured rehabilitation intervention was recently proposed by Zaworski et al. [11] that assessed the effects of the kinetic control concept in female football players suffering from back pain. This specific motor control training consists of re-educational exercises based on the identification of place and direction of uncontrolled movements. The authors found significant differences between the motor control training group and conventional training plan (control group) in terms of back pain and disability.

Taken together, the studies published in this issue of JBMR underline that both assessment and treatment strategies in LBP are still evolving, despite the evidence on such a common disease. We found that recent studies emphasized the need for a synergistic rehabilitative intervention to optimize the pain management and the functional recovery of patients suffering from LBP.

On behalf of the editorial team of JBMR, I hope you enjoy reading this issue!

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