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Research

The Relevance of Mind-Body-Medicine for Rheumatic Diseases

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Chronic rheumatic diseases such as systemic autoimmune inflammatory diseases with multiple organ involvement, inflammatory arthritis and multilocular chronic pain syndromes can affect patients physically and reduce their psychosocial functioning and quality of life despite adequate medical treatment within treat-to-target regimens. Medical treatment options, including biologic and targeted synthetic disease-modifying antirheumatic drugs, have made remarkable progress over the last decades. Concurrently, complementary therapies have become increasingly popular for physicians and patients.

Guidelines recommend that individual treatment decisions should be made through a shared decision-making process based on patients' values, goals, preferences and comorbidities (Fraenkel et al., 2021). In addition to pharmacological interventions, individuals with rheumatic diseases and their clinicians consider how Integrative Medicine can benefit patients and providers and be included in their disease management.

Integrative Rheumatology describes a rational and evidence-based approach that integrates the principles and practice of complementary therapies into the principles and practice of conventional medical therapy to improve quality of life while living with rheumatic condition. Within the last decades, Mind-Body Medicine (MBM) approaches have made increasing contribution to the treatment of chronic rheumatic and inflammatory diseases. In contrast, evidence on the effectiveness of MBM interventions is still limited. Beneficial effects were described for pain patients, fibromyalgia, osteoarthritis and rheumatoid arthritis (RA) when added to clinical practice and conventional medical treatment (Lauche et al., 2013; Lauche et al., 2015). For comorbid psychosocial disorders such as depression the main focus of Mind-Body interventions (MBIs) is on improving pain acceptance and adaptive coping behavior (Lauche et al., 2015). Techniques like Mindfulness-Based Stress Reduction (MBSR), Yoga, Tai Chi, Qigong and meditation have been shown to significantly reduce perceived pain intensity (Paul, 2023) and increase self-efficacy and self-care with very few side effects (Paul, 2023). Expanded MBIs following the BERN-model (behavior-exercise-relaxation-nutrition) are still under evaluation for rheumatic diseases. They integrate self-care, health promotion, resilience and applied neuroscience into one framework and aim to strengthen health and resilience, self-healing processes and reduce stress (Esch & Stefano, 2022).

The 2017 European League against Rheumatism (EULAR) recommendations for the management of fibromyalgia are underpinned by high-quality reviews and meta-analyses (Macfarlane et al., 2017). These show that cognitive behavioral therapies are effective in reducing pain at the end of treatment (standardized mean difference (SMD) with 95% confidence interval (CI): −0.29; −0.49 to −0.17)

and disability at the end of treatment (SMD: −0.30; CI: −0.51 to −0.08) (Bernardy et al.,

2013). Aerobic exercise is associated with improvements in pain (SMD: 0.65; CI: −0.09 to 1.39) and physical function (SMD: 0.66; CI: 0.41 to 0.92) (Busch et al., 2007). In addition, resistance training results in a significant improvement in pain (SMD: −3.3; CI: −6.35 to −0.26) as well as function compared with control (Busch et al., 2013). One meta-analysis of six trials with 674 patients provided evidence that MBSR can improve pain immediately post treatment compared with usual care (SMD: −0.23; CI −0.46 to −0.01) and compared with active control interventions (SMD: −0.44; CI: −0.73 to −0.16) (Lauche et al., 2013). Multicomponent therapy was effective in reducing pain (SMD: −0.37; −0.62 to −0.13) and fatigue (weighted mean difference with 95% confidence interval: -0.85; CI: –1.5 to –0.2), immediately post treatment, with short-lived effects (Häuser et al., 2009). For meditative movement, positive effects on sleep (reduced sleep disturbances) (SMD: −0.61; CI: −0.95 to −0.27) and fatigue (SMD: −0.66; CI: −0.99 to −0.34) were observed at the end of therapy, some of which were maintained in the longer term (Langhorst et al., 2013).

The German guideline for the interdisciplinary management of early arthritis (*S3-Interdisziplinäre Leitlinie zum Management der frühen rheumatoiden Arthritis*) recommends cognitive behavioral and psychological interventions to support positive effects on psychological stability, self-efficacy, physical activity, active coping-strategies and stress reduction, impairment due to pain, disability in everyday life, disease activity and reduced health care costs - based on multiple studies, including randomized-controlled trials (RCTs) and meta-analyses (Schneider et al., 2019). The guideline reflects the low level of evidence for MBIs. Two RCTs on meditation and progressive muscle relaxation were cited with no convincing results but without reported side effects (Macfarlane et al., 2017). Positive evidence for exercises such as Tai Chi (to reduce fatigue) and Yoga (to improve quality of life, physical and psychological aspects) was found. Due to a larger evidence base, patient education and self-management were recommended (Schneider et al., 2019).

In 2021, the German Society of Rheumatology (DGRh) launched a committee for complementary and alternative medicine (CAM) and nutrition. Based on the collection and evaluation of current evidence for CAM applications and nutritional interventions in rheumatology, recommendations were elaborated for clinical practice. Recently the committee published recommendations for the rheumatological routine in four areas: nutrition, mediterranean diet, Ayurvedic medicine and homeopathy (Keyßer et al., 2023). In rheumatoid arthritis, moderate evidence is assumed for some MBM procedures, mediterranean diet and omega 3 fatty acids (Keyßer et al., 2023). Physical procedures like Tai Chi were evaluated positively for spondyloarthritis (Danve & Deodhar, 2018).

The 2022 American College of Rheumatology (ACR) Guideline for Exercise, Rehabilitation, Diet, and Additional Integrative Interventions focuses specifically on the management of rheumatoid arthritis. They conditionally recommend the use of cognitive behavioral therapy and/or MBM approaches based on very low to low certainty evidence indicating no consistent improvement in pain and physical function but low to moderate certainty evidence of improvement in depression, anxiety, fatigue, and sleep when individuals with rheumatoid arthritis use these approaches (England et al., 2023). The interventions also showed benefits for chronic disease management (England et al., 2023). However, barriers such as access to experienced healthcare professionals and costs may reduce the uptake of these interventions (England et al., 2023).

All in all, the long-term effectiveness of MBM in rheumatic diseases is still to be analyzed. More controlled clinical trials and basic research are needed to evaluate the impact and mechanisms of MBIs in rheumatic diseases.

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