PENATALAKSANAAN FISIOTERAPI DENGAN *TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION, MICROWAVE DIATHERMY, DAN RESISTED ACTIVE MOVEMENT* PADA *OSTEOARTRITIS GENU DEXTRA*

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Abstrak

Osteoarthritis (OA) genu merupakan penyakit degeneratif sendi dengan prevalensi yang terus meningkat dan berdampak signifikan terhadap penurunan kemampuan fungsional serta kualitas hidup penderitanya. Kondisi ini ditandai oleh kerusakan kartilago artikular, nyeri, keterbatasan lingkup gerak sendi, serta penurunan kekuatan otot. Penatalaksanaan fisioterapi menjadi salah satu pendekatan penting dalam mengatasi permasalahan tersebut melalui intervensi modalitas dan latihan terapeutik. Penelitian ini bertujuan untuk mengetahui efektivitas penatalaksanaan fisioterapi menggunakan *Transcutaneous Electrical Nerve Stimulation* (TENS), *Microwave Diathermy* (MWD), dan resisted active movement pada kasus OA genu dextra.Penelitian menggunakan metode studi kasus dengan subjek seorang pasien perempuan usia 54 tahun yang didiagnosis OA genu dextra. Pengumpulan data dilakukan melalui wawancara, observasi, dan pengukuran menggunakan instrumen Visual Analogue Scale (VAS), *Manual Muscle Testing* (MMT), goniometer, serta *Western Ontario and McMaster Universities Arthritis Index* (WOMAC). Intervensi diberikan selama empat kali pertemuan dalam periode tertentu.Hasil penelitian menunjukkan adanya penurunan nyeri, peningkatan kekuatan otot, serta peningkatan lingkup gerak sendi. Selain itu, terjadi perbaikan kemampuan fungsional yang ditunjukkan melalui penurunan skor WOMAC dari kategori berat menjadi sedang. Meskipun demikian, kekakuan sendi belum menunjukkan perubahan yang signifikan.Dapat disimpulkan bahwa kombinasi intervensi TENS, MWD, dan resisted active movement efektif dalam mengurangi nyeri, meningkatkan kekuatan otot, serta memperbaiki fungsi aktivitas pada pasien OA genu dextra.

Kata kunci: *Osteoarthritis genu*, TENS, *Microwave Diathermy*, *Resisted Active Movement*, Fisioterapi

PHYSIOTHERAPY MANAGEMENT USING *TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION, MICROWAVE DIATHERMY*, AND *RESISTED ACTIVE MOVEMENT* IN RIGHT *KNEE OSTEOARTHRITIS*

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Abstrac

Osteoarthritis (OA) of the knee is a degenerative joint disease with an increasing prevalence and a significant impact on the decline of functional ability and patients' quality of life. This condition is characterized by damage to the articular cartilage, pain, limited range of motion, and decreased muscle strength. Physiotherapy management is an important approach in addressing these problems through modality interventions and therapeutic exercises. This study aimed to determine the effectiveness of physiotherapy management using *Transcutaneous Electrical Nerve Stimulation* (TENS), *Microwave Diathermy* (MWD), and *resisted active movement* in a case of right knee osteoarthritis.This study employed a case study method involving a 54-year-old female patient diagnosed with right knee osteoarthritis. Data collection was conducted through interviews, observation, and measurements using the *Visual Analogue Scale* (VAS), *Manual Muscle Testing* (MMT), a goniometer, and the *Western Ontario and McMaster Universities Arthritis Index* (WOMAC). The interventions were administered over four treatment sessions within a specified period.The results showed a reduction in pain (VAS), an increase in muscle strength (MMT), and an improvement in joint range of motion. In addition, there was an improvement in functional ability as indicated by a decrease in the WOMAC score from severe to moderate category. However, joint stiffness did not show a significant change.It can be concluded that the combination of TENS, MWD, and resisted active movement interventions is effective in reducing pain, increasing muscle strength, and improving functional activity in patients with right knee osteoarthritis.

Keywords: *Knee Osteoarthritis*, TENS, *Microwave Diathermy*, *Resisted Active Movement*, Physiotherapy