



Trends in the use of shock wave therapy for musculoskeletal disorders in a rehabilitation center: Descriptive analysis and five-year projection

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Introduction

Chronic musculoskeletal pain represents a leading cause of disability and reduced quality of life worldwide. In Colombia, a substantial number of patients referred to Physical Medicine and Rehabilitation (PM&R) services present with chronic pain of muscular, tendinous, or skeletal origin, often refractory to previous pharmacological and therapeutic interventions. Among the most prevalent pathologies are rotator cuff syndrome, lateral epicondylitis, and plantar fasciitis, which are commonly seen in individuals aged 50 to 70 years.

Objective: To characterize the clinical application, epidemiological trends, and future projections of Radial Pressure Wave Therapy (RPWT) in a specialized outpatient rehabilitation facility in Bogotá (Electrofisiatría SAS), focusing on its utility for chronic musculoskeletal disorders.

Material & Methods

A retrospective observational analysis was conducted using institutional clinical records from 2020 to 2025, identifying the number of RPWT sessions, associated diagnoses, patient age and sex distribution, and annual growth trends. Multi-session procedures were analyzed, excluding extracorporeal lithotripsy cases. Data visualization and statistical projection models (logarithmic and polynomial) were used to estimate service demand from 2026 to 2030.

Results

Between 2020 and 2025, 9,850 RPWT sessions were performed, representing 97.1% of all shockwave procedures. The most common diagnoses were rotator cuff syndrome (30.4%), lateral epicondylitis (15.9%), and plantar fasciitis (12.7%), predominantly affecting women (79%) aged 41–70 years (80.5%). Treatment protocols included 3–4 sessions at 8-day intervals using pneumatic RPW devices. A consistent annual growth rate exceeding 40% was observed, with projections estimating more than 14,000 sessions by 2030. This trend aligns with increasing population longevity and higher prevalence of degenerative musculoskeletal diseases.

Discussion

RPWT has gained significant traction as a non-invasive, cost-effective alternative for managing chronic musculoskeletal pain, especially in older adults. The treatment shows promising results in pain reduction and functional improvement, making it an essential tool in outpatient rehabilitation services. Institutional demand is expected to increase over the next five years due to favorable clinical outcomes, increased physician awareness, and rising chronic disease burden.

Healthcare providers should expand RPWT capacity by investing in technology and physician training. Further research, including randomized controlled trials and functional outcome assessments, is necessary to compare RPWT with focused shockwave therapy and define clinical guidelines for its broader application.