

EFFECTS OF GROUP-BASED VS HOME-BASED EXERCISE PROGRAMMES IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background and Aims

Ankylosing spondylitis (AS) is a chronic inflammatory disease that significantly impairs spinal mobility and functionality. Exercise-based physiotherapy is a key non-pharmacological intervention; however, limited evidence compares supervised group-based with unsupervised home-based programmes regarding functional and biomarker outcomes. This study aimed to compare the effects of 6-month group-based versus home-based exercise programmes on functional capacity and inflammatory biomarkers in individuals with AS.

Methods

Quasi-experimental study with Thirty-one patients diagnosed with AS were recruited and assigned to one of three groups: group-based exercise (n=12), home-based exercise (n=12), or control (n=7). Functional assessments included the Bath Ankylosing Spondylitis Functional Index (BASFI), Disease Activity Index (BASDAI), and Metrology Index (BASMI), as well as the Oswestry (ODI) and Neck Disability Indices (NDI). Inflammatory biomarkers included C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR). Baseline and post-intervention (6 months) evaluations were conducted. Statistical analyses included intra- and intergroup comparisons ($\alpha=0.05$).

Results

At baseline, no significant differences were found among groups. After 6 months, the group-based exercise group showed significant improvements in BASFI ($p=0.048$) and BASMI ($p=0.001$), while the control group exhibited significant declines in both indices ($p=0.003$ and $p=0.025$, respectively). The home-based group presented a significant reduction in CRP ($p=0.037$), although no functional index showed statistical improvement. BASMI intergroup comparison showed significant differences ($p=0.028$), with post-hoc tests indicating improvement in both exercise groups compared to control. No significant changes in ESR were detected in any group. The control group showed a significant deterioration in BASDAI ($p=0.017$) and NDI ($p=0.020$).

Conclusion

A supervised, group-based exercise programme led to significant improvements in functional mobility and status in individuals with AS, whereas the home-based intervention was associated with a reduction in systemic inflammation (CRP). These findings highlight the differential benefits of exercise modalities in managing AS and support the integration of supervised programmes into routine care.

Keywords: Disease activity, functionality, biomarkers, physiotherapy