

Understanding Posture-Pain Dynamics in Ankylosing Spondylitis: A Narrative Review

REETUJA¹, AKANKSHA PAL², MUSKAN KUMARI³, LALLI SINGH⁴

ABSTRACT

This review article responds to the question of whether postural changes in Ankylosing Spondylitis (AS) represent a cause, consequence, or aggravating factor of pain. AS is a chronic inflammatory disease of the axial skeleton that results in progressive stiffness, structural deformity, and functional impairment. Postural changes such as thoracic hyperkyphosis, forward head posture, loss of lumbar lordosis, and sagittal imbalance are frequently observed and are thought to contribute to mechanical strain, impaired mobility, and increased pain. However, the precise nature of the relationship between posture and pain in AS remains uncertain. This review summarises current evidence from randomised controlled trials, biomechanical studies, and systematic reviews published over the past two decades. Evidence indicates that abnormal postural

alignment is uniformly linked to increased pain intensity and lower quality of life. Evidence states that intervention in maintaining movement, spinal mobility, and functional exercise is a more significant contributor to pain reduction and quality of life compared to static posture correction alone. However, heterogeneity of methods, limited follow-up, and absence of standardised postural assessment tools confound the quality of existing evidence. In summary, although posture seems to be strongly associated with pain in AS, it is still uncertain whether postural deviation is a disease-related consequence or an underlying cause of pain. Longitudinal and methodologically sound studies are needed to better establish causality and to refine posture-based rehabilitation in this patient group.

Keywords: Ankylosing spondylitis, Rehabilitation, Spinal deformity

PARTICULARS OF CONTRIBUTORS:

1. Postgraduate Student, School of Physiotherapy, SGT University, Gurugram, Haryana, India.
2. Postgraduate Student, School of Physiotherapy, SGT University, Gurugram, Haryana, India.
3. Undergraduate Student, School of Physiotherapy, SGT University, Gurugram, Haryana, India.
4. Assistant Professor, School of Physiotherapy, SGT University, Gurugram, Haryana, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Lalli Singh,
Assistant Professor, School of Physiotherapy, SGT University, Gurugram, Haryana, India.
Email: lalli_sphy@sgtuniversity.org