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# THE CLINICAL RELATIONSHIP BETWEEN HLA-B27 AND JUVENILE SPONDYLOARTHROPATHY

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***Abstract***

*Juvenile spondyloarthropathies (JSpA) encompass a cluster of interconnected rheumatic conditions that manifest during the formative stages of an individual's life, specifically prior to their sixteenth birthday. The primary characteristics of juvenile spondyloarthropathies include both axial and peripheral arthritis, enthesitis, extra-articular symptoms, and a strong association with the human leukocyte antigen HLA-B27. There exists substantial evidence of the involvement of tumor necrosis factor and interleukin-17 in the pathophysiology of these conditions. A variety of non-biological and biological therapies have been employed in the treatment of these intricate disorders, showing inconsistent outcomes.*

*This study examines the correlation between HLA-B27 and juvenile spondyloarthropathies, as well as the involvement of HLA-B27 in the pathology of the disease. The present study focuses on the clinical characteristics of HLA-B27 in juvenile spondyloarthropathies and examines the recently recommended therapy for individuals with juvenile spondyloarthropathies.*

***Keywords:*** *Juvenile spondyloarthropaties, HLA-B27, Tumor necrosis factor, Interleukin*

## Introduction

Juvenile spondyloarthropathy, also known as juvenile spondyloarthritis juvenile spondyloarthropathies (JSpA), is a group of inflammatory rheumatic diseases that mainly affect children and adolescents. JSpA affects individuals under the age of 16. These conditions are characterized by inflammation in the joints and entheses (the areas where tendons and ligaments attach to bones) and can involve the spine, peripheral joints, and other organs. Common subtypes of JSpA include juvenile psoriatic arthritis, juvenile ankylosing spondylitis, and juvenile reactive arthritis. Symptoms may include joint pain, stiffness, and swelling, especially in the lower back and pelvis. In some cases, skin and eye involvement can occur, and children with JSpA may experience fatigue and reduced physical function. Early diagnosis and management are crucial to minimize joint damage and improve the quality of life for affected patients. Treatment may involve medications to reduce inflammation, physical therapy, and lifestyle modifications [*Sridharan R et al., 2015; Adrovic A et al., 2016*].

HLA-B27 is a specific human leukocyte antigen (HLA) gene that plays an influential role in the development of JSpA, as well as in the adult counterpart, ankylosing spondylitis (AS) that HLA-B27 is found in 88% of patients with ankylosing spondylitis [*Kavadichanda C. G et al., 2021*]. This gene is strongly associated with JSpA and potential axial involvement and is found in a high prevalence in patients with JSpA. The presence of HLA-B27 antigen in patients with JSpA is associated with a smaller number of

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