

Hidradenitis Suppurativa, Ankylosing Spondylitis, and Ocular Inflammation: A Shared Pathway Review

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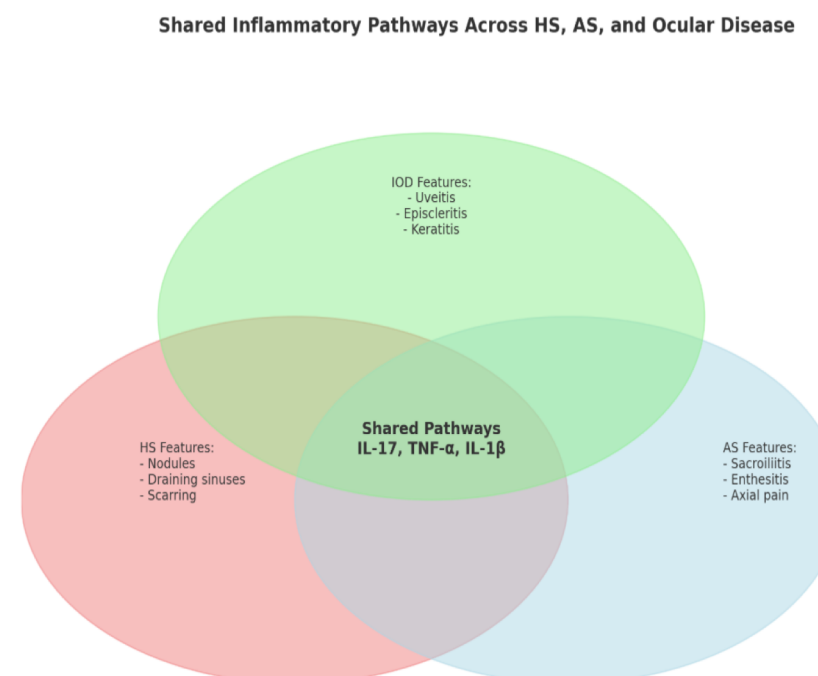
INTRODUCTION

Hidradenitis suppurativa (HS) is increasingly associated with systemic comorbidities, including ankylosing spondylitis (AS) and various inflammatory ocular diseases (IOD). Elevated levels of TNF- α and IL-17 are seen in all three conditions, suggesting shared dysregulated inflammatory pathways. Understanding these connections allows for treatment strategies that simultaneously address skin, joint, and ocular manifestations.

METHODS

A systematic literature review was conducted using PubMed identifying original research articles, case series, clinical trials, and meta-analyses on HS, AS, and IOD from 2015 to 2025. The following was extracted: (1) shared immunologic pathways (e.g., TNF- α , IL-17/IL-23 axis), (2) musculoskeletal comorbidities including axial and peripheral joint involvement, and (3) ocular manifestations such as uveitis, episcleritis, and conjunctivitis.

Figure 1.
Shared Cytokine Pathways Linking Hidradenitis Suppurativa, Ankylosing Spondylitis, and Inflammatory Ocular Disease.



RESULTS

Sixteen studies were identified by the systematic search. Patients with HS demonstrated increased rates of ankylosing spondylitis, enthesitis, and sacroiliitis. Axial and peripheral joint symptoms often appeared after initial skin disease onset. Ocular inflammatory conditions, including uveitis, episcleritis, blepharokeratoconjunctivitis, and peripheral ulcerative keratitis, were reported, with bilateral corneal neovascularization and stromal infiltration in severe cases. Common immunologic features included elevated TNF- α , IL-17, and IL-1 β across skin, joint, and ocular sites. Syndromic patterns such as PASS and PsAPASH further supported systemic inflammatory overlap.

DISCUSSION

Delayed joint and ocular symptoms in HS patients underscore the need for proactive, multisystem evaluation even when skin disease appears isolated. Syndromic variants like PASS and PsAPASH illustrate the broader inflammatory overlap that may otherwise go unrecognized. Screening for axial and peripheral symptoms as well as ocular inflammation should be routine in moderate-to-severe HS cases. Shared cytokine pathways, particularly IL-17 and TNF- α , highlight the potential of targeted biologics to address multiple disease domains. These findings support an integrated, collaborative approach to managing HS and its multisystemic comorbidities across specialties.