Undifferentiated Spondyloarthritis

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Introduction

Undifferentiated spondyloarthritis (USpA) is a term used to describe symptoms and signs of spondylitis in someone who does not meet the criteria for a definitive diagnosis of AS or a related disease.

Introduction

- The prevalence of USpA is 0.3-1% (1,2)
- Over time, some people with USpA will develop a more well-defined form of spondylitis such as ankylosing spondylitis

1. Olivieri I, Salvarani C, Cantini F, Ciancio g, Padula A. Ankylosing spondylitis and undifferentiated spondyloarthropathies : a clinical review and description of a disease subset with older age at onset. Curr opin Rheumatol 2001 : 13: 280-4
2. Zochiling J, Brandt J, Braun J. The currentconcept of spondyloarthitis with special emphesis on undifferentiated spondyloarthitis.Rheumatology (Oxford).2005;44(12): 1483-91

Introduction

Because the symptoms tend to be general, a person may be mistakenly diagnosed as being anxious or depressed or having fibromyalgia.

Etiopathogenesis

The precise etiology of Undifferentiated spondyloarthropathy is unknown but involves the interaction of genetic and environmental factors (3).

3. Khare SD, Luthra HS, David CS. HLA B27 and other predisposing factors inspondyloarthropathies. Curr opin Rheumatol 1998; 10 : 282-91.

Etiopathogenesis

There are strong association with some subtypes of HLA B27 which supports the view that the disease is due to genetically determined immune response to environmental factors in susceptible individuals (4).

4. Reveille JD, Ball EJ, Khan MA. HLA B27 and genetic predisposing factors in spondyloarthropathies curr opin rheumatol 2001; 13: 265-72.

Pathophysiology

The primary pathology is enthesitis. This is mediated by CD4 and CD8 T lymphocytes and macrophages leading to elaboration of cytokines particularly tumor necrosis factor α (TNF-α) and transforming growth factor β (TGF-β) (5).

5. Mc Gonagle D, Gibbon W, Emery P. Classification of inflammatory arthritis by enthesitis. Lancet Oct 3. 1998: 352(9134) : 1137-40.

Clinical features of USpA

- Age of onset : young to middle aged with a peak onset at around 50 years
- The male to female ratio – 1:3
- Onset – usually insidious
- Even after years of active disease, sacroillitis and spondylitis are either absent or very mild
- Extra articular manifestations are uncommon occurring in less than 10% of patients

Rezaian MM, Brent LH. Undifferentiated spondyloarthropathy : Sevenyear follow-up study of 357 patients. Arthritis Rheum 2001; 44: S93.

Clinical Presentation

- Inflammatory back pain 90%
- Buttock pain 80%
- Enthesitis 75%
- Peripheral arthritis 40%
- Dactylitis (sausage digits) 20%
- Acute anterior uveitis 1-2%
- Fatigue 55%
- Elevated ESR 32%
- HLA B27 +ve 25%

Variants of USpA

- A syndrome of seronegativity, enthesopathy and arthropathy (SEA) has been described in children which is clinically similar to USpA . These children often develop ankylosing spondylitis over time with typical radiographic changes, usually in early adulthood (6)

6. Tse SM, Laxer RM. Juvenile spondyloarthropathy. Cur opin rheumatol. Jul 2003; 15(4): 374-9.

Variants of USpA

- Ankylosing tarsitis – seen in children presenting with enthesitis in the tarsal region(6)
- Syndrome of acute anterior uveitis (acute iritis), aortic incompetence and heart block with no signs of arthritis (7)

7. Pato E, Baranes A, Jover JA et al. Undiognosed spondyloarthropathy in patients presenting with arterior uveitis. J. Rheumatol. 2000; 27: 2198- 202.

Diagnosis

Modified Amor criteria (Inclusion criteria)

• Inflammatory back pain	1 point
• Unilateral buttock pain	1 point
• Alternating buttock pain	2 points
• Enthesitis	2 points
• Peripheral arthritis	2 points
• Dactylitis (sausage digit)	2 points
• Acute anterior uveitis	2 points
• HLA-B27 –positive or family history of spA	2 points
• Good response to NSAIDs	2 points

Diagnosis of spondyloarthropathy with 6 or more points

ASAS Classification Criteria for Axial Spondyloarthritis (SpA)

In patients with ≥ 3 months back pain and age of onset < 45 years

Sacroiliitis on imaging
AND
≥ 1 SpA feature

OR

HLA-B27 positive
AND
≥ 2 other SpA features

SpA features

- inflammatory back pain
- arthritis
- enthesitis (heel)
- uveitis
- dactylitis
- psoriasis
- Crohn's / colitis
- good response to NSAIDs
- family history of SpA
- HLA-B27
- elevated CRP

Sacroiliitis on imaging

- active (acute) inflammation on MRI highly suggestive of sacroiliitis associated with SpA
- definite radiographic sacroiliitis according to modified New York criteria

Sensitivity 82.9% Specificity 84.4%

Rudwaleit M et al. Ann Rheum Dis 2009;68:777-783

Exclusion Criteria

USpA is excluded if any of the following is present :

- Diagnosis of specific spondyloarthropathy
- Sacroiliitis on radiograph ≥ grade 2
- Precipitating genitourinary/GI infection
- Psoriasis
- Keratoderma blennorrhagicum
- Inflammatory bowel disease
- Positive rheumatoid factor
- Positive antinuclear antibody

Investigation

- Laboratory investigation are non specific
- RA factor and ANA (-ve)
- ESR & CRP is elevated in 75% of patients
- Creatine kinase (CK) is occasionally elvated
- Serum IgA level may be elevated
- HLA B27 + Ve in 25% of USpA

Investigation

- Plain X-ray may show evidence of periosteal newbone formation at enthesium and early syndesmophytes on the lumbar spine without bridging
- MRI : using fat saturating techniques like – short tau inversion recovery (STIR) or MRI with gadolinium are more sensitive for early evidence of sacroiliitis, erosions and enthesitis

Management

- **NSAIDS** : They are the starting point of treatment
- **Corticosteroids** : Local corticosteroid injections are helpful in symptomatic enthesitis, plantar fasciitis and secroiliitis
- **DMARDs** : Sulfasalazine, methotrexate (8)

8. Braun J, Zochling J, Baraliakos X et al. Efficacy of salfasalazine in patients with inflammatory back pain due to undifferentiated spondyloarthritis and early ankylosing spondylitis : a multicentre randomised controlled trial. Ann Rheum Dis 2006: September; 65(9): 1147-1153.

Management

- **TNF α Blockers** : Infliximab & Eternercept in patients with severe, active USpA have shown marked benefit on spinal pain, peripheral arthritis, BASDAI, BASFI and quality of life (9)

9. Brandt J, Khariouzov A, Listing J et al. Successful short term treatment of patients with severe undifferentiated spondyloarthritis with the anti TNF-α fusion receptor protein etanercept. J.Rheumatol 2004. 31531-538.

Management

- Exercise to maintain mobility, active life style and to reduce stiffness
- Hot baths and warm showers for stiffness
- Ice for swelling
- Ultrasound therapy

Management

- Gentle massage therapy
- Electrical stimulators for pain
- Losing weight to lessen stress on joints
- Improving posture
- Surgery, in some cases

Thank You