Case Report

Rheumatoid Arthritis with Ankylosing Spondylitis : A rare association

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ABSTRACT

A 50 year old lady comes with complain of low back pain since the last 5 years associated with morning stiffness for the same duration and multiple joint pain for last 6 years. She has been known patient of type 2 Diabetes Mellitus since last 6 years and that of Hypertension since the last 10 years. On examination bilateral Metacarpophalangeal (MCP), Proximal interphalangeal (PIP), Wrist, Elbow, Shoulder, Metatarsophalangeal (MTP),Ankle joints are found tender. Modified Schobers Test is positive, and BASDAI is 4.3. In investigation rheumatoid factor, anti-cyclic citrullinated peptide (CCP) antibody, and HLAB27 have been tested positive. Extractable nuclear antigen (ENA) profile and HLACW6 both are found negative. Erythrocyte sedimentation rate(ESR) and C-reactive protein(CRP) both are very high. Power Doppler Ultrasonogram of hands shows synovial thickening with hyperaemia with joint erosion. Both X ray and MRI of Sacro-iliac (SI) joints show bilateral sacroilitis.

Keywords: Ankylosing spondylitis, joint erosion, rheumatoid arthritis, sacroilitis

Introduction

Rheumatoid arthritis (RA) and Ankylosing Spondylitis (AS) both are chronic progressive inflammatory diseases which lead to joint damage and then the disability of patients. Etiopathogenesis of both diseases has been poorly established. Their genetic predispositions are different. HLAB27 is associated with ankylosing Spondylitis and HLA DR4 is sometimes seen in Rheumatoid Arthritis patient.[1] First known serological

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marker to diagnose Rheumatoid Arthritis is Rheumatoid factor since 1950.[2] Recently Anti CCP used to diagnosed RA.The diagnosis of RA is done by American College of Rheumatology/European League Against Rheumatism (ACR /EULAR) 2010 criteria.[3] (Table1) and diagnosis of Ankylosing Spondylitis according to modified New York criteria[4] (Table 2) and presence of HLAB 27 antigen.

Case Report :

A 50 year old lady came with complain of lower back pain associated with morning stiffness lasting for more than 30 minutes since the last 5 years. There was also history of multiple joint pain with swelling since the last 6 years. She had been known patient of type 2 Diabetes Mellitus (on oral anti diabetic drug) since the last 6 years

Table 1: 2010 ACR/EULAR. Classification Criteria for RA[3]

		SCORE
Joint involvement	1 large joint	0
	2-10 large joints	1
	1-3 small joints (with or without involvement of large joints)	2
	4-10 small joints (with or without involvement of large joints)	3
	> 10 joints (at least 1 small joint)	5
Serology	RF – and Ante- CCP-	0
	Low RF+ or Anti-CCP+[Low: < 3 x upper limit of normal (ULN)]	2
	High RF+ or Anti-CCP+(High: > 3 x ULN)	3
Acute phase reactants	Normal ESR and normalCRP	0
	Abnormal ESR or CRP	1
Duration of symtomps	< 6 Weeks	0
	> 6 Weeks	1

Note : These criteria are aimed at classification of newly presenting patients who have at least one joint with definite clinical synovitis that is not better explained to another disease.A score of ≥6 fulfills requirements for definite RA.

Abbreviations : RF: rheumatoid factor. CCP: anti-citrullinated citric peptide. ESR: erythrocyte sedimentation rate. CRP: C-reactive protein.

Table 2: Modified New York criteria for Ankylosing spondylitis (AS)[4]

1. Low back pain of at least 3 months' duration improved by exercise and not relieved by rest
2. Limitation of lumber spine in sagittal and frontal planes
3. Chest expansion decreased relative to normal values for age and sex
4. Bilateral sacroiliitis grade 2 to 4
5. Unilateral sacroiliitis grade 3 or 4

*Definite AS Unilateral sacroiliitis grade 3 or 4 or bilateral sacroiliitis grade 2 to 4 and any clinical criterion

and Hypertension (on anti hypertensive therapy) since the last 10 years. Six years before she was diagnosed as a case of sero-positive Rheumatoid Arthritis and she was put on Methotrxate, Sulfasalazine and Prednisolone . On examination bilateral MCP, PIP , Wrist, Elbow, Shoulder, MTP, Ankle joints were found tender only but bilateral knee joints were found tender and swollen both . Modified Schobers Test was found positive with lateral extention was 12 cm though chest expansion found normal. Ophthalmoscopic finding was unremarkable. On investigation Complete hemogram was normal.ESR and CRP both were of very high level.Rheumatoid factor and Anti CCP Antibody wrer found positive with value of 67.9 and 443.69 respectively. HLAB27 was also positive. All the parameters of ENA profile and HLACW6 found negative. Serology for HIV, hepatitis B & C was negative. Plain chest radiographs revealed no abnormality. Serum creatinine and urine albumin to creatinine ratio and with Crystal study and serum uric acid level were normal. Bilateral sacroilitis was confirmed on plain radiograph as well as MR imaging (Figure -1& 4). Decreased joint spaces with periarticular osteopenia and with soft tissue swelling of bilateral knee joints were found on plain radiograph(Figure -2). Synovitis with mild hyperaemia and joint erosion of both right radio ulnar and right second MCP joints were confirmed on power doppler ultrasonograph (Figure -3) .

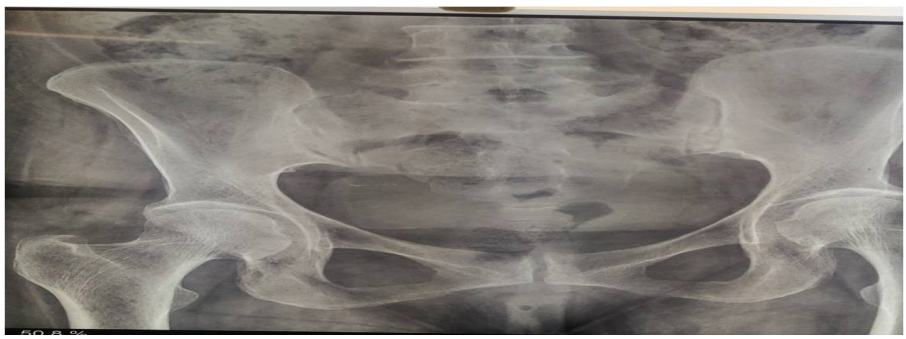
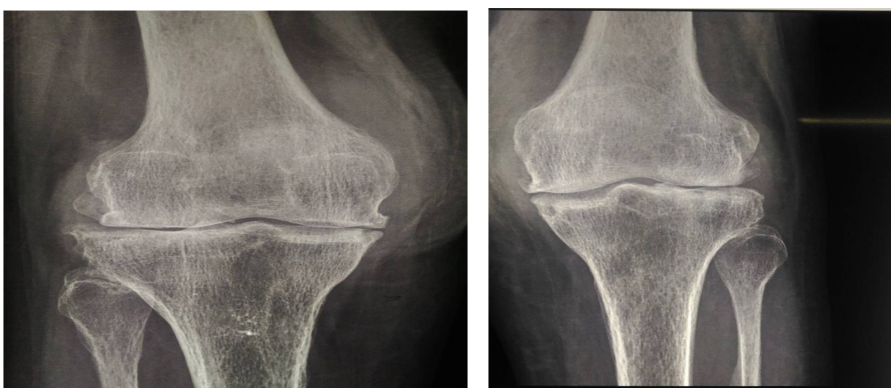


Figure 1: X- ray of Sacroiliac joint shows bilateral sacroiliitis(right – grade 4 & left – grade 3)



X ray right knee joint X ray left knee joint

Figure 2: X ray bilateral knee joint shows decreased joint spaces with periarticular osteopenia and soft tissue swelling

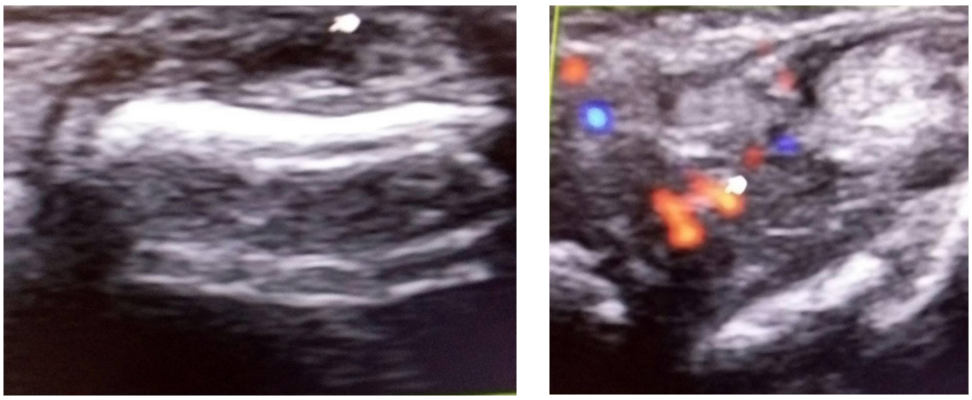


Figure 3: USG power doppler study of hand joints shows right radio ulnar & 2nd MCP synovitis with mild hyperaemia and joint erosion.

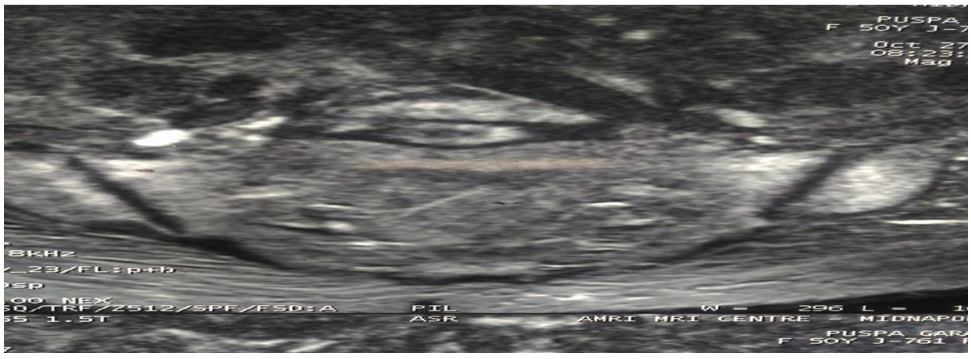


Figure 4: MRI SI joint shows bilateral sacroiliitis.

Discussion

Rheumatoid arthritis (RA) and ankylosing spondylitis (AS) are common among the rheumatic diseases. However, their etiology and clinical features are different. Formerly, AS was often wrongly diagnosed as RA. Today we are not facing major diagnostic difficulties in differentiation between these diseases, thanks to modern laboratory tests and imaging. However, a problem may arise when the patient has symptoms typical for both diseases simultaneously. Cases of coexistence of RA with AS – according to our best knowledge – are rare. There are few case report in coexistence of RA and AS.[5,6]

Conclusion

Diseases with similar clinical features of RA have been excluded, particularly Psoriatic arthritis (PsA) and crystal arthropathies. AS and PsA both are belong to same group spondyloarthropathy. So PsA needs to be exclusion first. HLACW6 found negative here.

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Nil

Conflict of interest

There are no conflicts of interest.

Table 1: Comparison of our case & prior case report of coexistence of RA and AS

Case Report	Tacjana Anna Barczyńska et al [5]			B Baksav et al [6]	Our case
Case No.	1	2	3	4	
Gender	Female	Male	Male	Female	Female
Age (Years)	55	56	65	55	50
Rheumatoid factor	Positive (>200)	Positive (>200)	Positive (73.6)	Positive	Positive (63.9)
Anti CCP Antibody	Positive (600 U/ml)	Negative (0.9 U/ml)	Negative (3.6 U/ml)	Positive	Positive (443.69)
HLA B27	Positive	Positive	Positive	Positive	Positive
X ray Hand	Joint erosion	Joint erosion	Joint erosion	Joint erosion	Erosion on USG
X ray Pelvis	Bilateral grade IV sacroilitis	Bilateral grade IV sacroilitis	Rt. –grade III Lt.- Grade IV sacroilitis	Bilateral grade IV sacroilitis	Rt. –grade 4 Lt.- Grade 3 sacroilitis

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