

CLINICAL PROFILE AND TREATMENT OUTCOMES IN PATIENTS WITH ANKYLOSING SPONDYLITISY. Ramesh Naidu¹, Y. Sharmila², Y. Nischal³, V. Srinivas⁴, V. Satyaprasad⁵**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Ankylosing spondylitis belongs to a group of diseases known as Spondyloarthritides characterized by inflammatory low backache. It is a chronic inflammatory disease of unknown etiology, mostly associated with HLA B27 positivity affecting skeletal (both axial and extra-axial) and extra skeletal system. In general population Ankylosing spondylitis is likely to develop in about 1% to 2% of HLA-B27+ who have a disease-associated B27 subtype and is much more common among HLA-B27+ first degree relatives of HLA-B27+ AS Patients. Positive family history is a strong risk factor for the development of the disease. Ankylosing Spondylitis is a disease which mostly affects young males and working population. It is a chronic illness with exacerbations and remissions and leads to debility and significant morbidity and hence affects the quality of life significantly. This study has been carried out in Medicine department of Rangaraya medical college GGH Kakinada, Sraddha Hospital, Visakhapatnam, Andhra medical college, KGH, Visakhapatnam, GEMS College and Hospital, Srikakulam with an aim to study the articular and extra articular manifestations of Ankylosing Spondylitis, factors affecting exacerbations and remissions. Correlation between disease activity and acute phase reactants, familial association, and to study the short term treatment outcomes.

KEYWORDS: HLA B27, Rheumatoid factor, C –Reactive protein, X Ray Spine.

INTRODUCTION: MATERIALS AND METHODS: 50 patients who were diagnosed as Ankylosing Spondylitis as per ASAS criteria was enrolled in the study. The patient was investigated as per discretion of the treating physician and treated as per standard protocol. Age greater than 18 years with onset of disease after 16 years were taken and patients with spondyloarthropathy associated with inflammatory bowel disease, Gut infection associated, psoriasis, AS with overlap syndrome, Juvenile Ankylosing Spondylitis, pregnant and lactating mothers were excluded. Clinical manifestations of AS usually begin in the late adolescence or early adulthood. Only rarely do they begin after the age of 40¹. The diagnosis of AS at an early stage of disease depends primarily on a careful history and physical examination. Proposed criteria for inflammatory back pain in young to middle aged adults with chronic back pain are a) Morning stiffness of at least 30 minutes duration b) Improvement of back pain with exercises but not with rest c) Awakening because of back pain during second half of night only d) Alternating buttock pain. Investigations such as ESR and CRP, Lipid Profile, X-ray and MRI are done. Majority of the patients diagnosed with preradiographic axial spondyloarthritis has MRI evidence of spondyloarthritis², and the severity of bone edema on MRI has been shown to predict the development of radiographic sacroiliitis on follow up³.

OBSERVATIONS: Of the 50 patients 92% (46) were males and 8% (4) were females. Sex ratio was 11.5:1. According to age wise distribution 68% (34/50) of the patients had onset of the disease before the end of 3rd decade. Based on duration 46% of the patients presented in the first year of illness 16% (8 out of 50) of the patient presented after 7 years of illness. Positive family history was

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present in 12% (6 out of 50) of the patients. All the patients (100%) had musculoskeletal involvement no patient had pure extra musculoskeletal involvement. 12% of the patients had extra musculoskeletal involvement all of them had acute anterior uveitis (5 of them had unilateral and 1 had bilateral uveitis). None of the patients had CVS, CNS or Renal involvement. In the articular features: 90% of the patients had axial involvement of which 64% had both axial and extra axial. Pure extra-axial involvement was seen only in 10% of the cases. 78% (35 out of 45) of the patient with axial involvement had low back ache while 22% (10 out of 45) of the patients had neck pain in addition to back ache. None of the patients had isolated neck pain. Of this 47% (21 out of 45) of the patients having axial involvement had positive Schobers test which is sequel of long standing disease. 30% of the patients had decreased neck mobility which is sequel of long standing disease. Extra-axial involvement the most commonly involved joint in the lower Limbs was knee joint followed by ankle joint and that in the upper Limb was shoulder joint and was more in lower Limbs than upper Limbs and was asymmetrical. 12 of patients had Achilles tendonitis, 1 patient had pubic symphsitis and 1 patient has enthesitis at greater trochanter. 36%(18 out of 50) of the patient already had changes of sacroiliitis on conventional radiography when they presented of long standing disease as it takes 6 to 8 years for the changes to develop. All (32 out of 50) the patient with normal X-Ray of LS spine and SI joint underwent MRI of SI joint with screening of LS Spine and all of them had abnormal findings on MRI in the form of sacroiliitis. Out of 32 patients who had evidence of sacroiliitis on MRI, 28 patients had bilateral signs of inflammation. Thus SI joint affection is more symmetrical. Out of the 32 patients with abnormal MRI SI joint, inflammatory changes in the LS spine on MRI was seen in only 6 patients.

DISCUSSION: In the study 50 patients who are recently diagnosed as patients of ankylosing Spondylitis by ASAS criteria were included. All the patients were treatment Naïve. Of the 50 patients in study 46 were males and only 4 were females. Sex ratio was 11.5:1. Male to female prevalence is between 2:1 to 3:1⁴. The mean age of onset of the disease in a study was 26 years with mean diagnostic delay of 3 years. Duration of delay in diagnosis was less in our study as compared to other studies. The reason for less delay could be due to increased Awareness of the disease in treating physicians and better availability of diagnostic modalities. HLA B27 was positive in 100% of the patients and positive family history was present in 12 % of the patients. Clinical features: All the patients had musculoskeletal involvement. Few patients (12%) had additional extra musculoskeletal involvement. Out of all the patients who had musculoskeletal involvement 64% had both axial and extra axial involvement, 26% had pure axial, and 10% had pure extra-axial involvement. Thus 90% of the patients had axial involvement. 74% of the patients had extra axial involvement which is similar to two Indian studies of 1984 and 2009 by Prakash S et al. and Aggarwal R et al. respectively^{5,6}. It is slightly more than reported by Tim TJ et al. in Korean study and other western literature⁷. Thus our study also shows that Indians have more extra-skeletal involvement than the west. Actual involvement was in the form of low back ache which was seen in 100% of the cases. Significant number of patients presented when they had advanced disease. These findings suggest the need for early diagnosis. 12% of patient had extra articular involvement in the form of uveitis. Extra axial involvement was in the form of peripheral arthritis which was seen in 74% (37 out of 50) of the cases. In the lower limb most common joint affected was Knee with 48 % followed by Ankle with 38 % and hip with 28 % whereas hip joint is most commonly involved in western countries. In the upper limb most common joints affected were shoulder and elbow. Thus peripheral arthritis is typically bilaterally asymmetrical predominantly affecting the lower Limbs which is similar to Western

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countries. MRI is highly sensitive in picking up early inflammatory changes of sacroiliitis which were missed by conventional radiography thereby helping in early diagnosis. Sacroiliitis is more or less bilaterally symmetrical which is similar to Western literature⁷. ASAS criteria were very helpful in the early diagnosis of the patients over the old criteria and thereby having significant treatment outcome. After 3 months of treatment there was statistically significant improvement in the VAS score and CRP but there is no significant difference in ESR. Thus CRP is a better marker as an acute phase reactant in ankylosing Spondylitis which is similar to the study conducted in 2004 by Yildirim Ket al⁸. But differs with two other studies which reports that neither CRP nor ESR is useful for assessing disease activity in AS.^{9,10}

CONCLUSION: Ankylosing Spondylitis is a disease of young people. It predominantly affects males. The mean age of onset of the disease in our study was 26 years with mean Diagnostic delay of 3 years from the onset of first recognized symptom. It mainly affects the musculoskeletal system predominantly. Axial involvement is more common than extra-axial involvement which is characterized by inflammatory low backache and neck pain. Significant portion of these patients presented with Limited motion of the spine suggestive of longstanding disease and delay in diagnosis which effects long term morbidity. SI joint infection is bilateral in 90 % of the cases. Extra axial joint involvement is more in Indian population most common joint affected his knee joint followed by ankle joint in the lower Limbs and shoulder joint in the upper Limbs. The peripheral arteritis is predominantly asymmetrical and effects lower Limbs more than upper Limbs. The most common extra musculoskeletal feature is acute anterior uveitis. Family history is positive in 12 % of the patients. All patients were HLA B27 positive. Enthesitis is seen in 28 % of the patients the most common site of enthesitis is Achilles tendon insertion. There are no specific factors affecting exacerbations and remissions. The latest ASAS Diagnostic criteria help to pick up early cases of ankylosing Spondylitis which are missed by the previous modified New York criteria. This helps in early diagnosis and treatment which can reduce long-term mobility. MRI picks up early inflammatory changes of sacroiliitis which are not picked up by conventional x-ray thereby helping in early diagnosis. There was statistically significant improvement in VAS score after 3 months of treatment. ESR doesn't statistically correlate with disease activity. CRP value changed significantly with improvement in the VAS score after 3 months of treatment.

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