

A REVIEW: ANKYLOSING SPONDYLITIS

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ABSTRACT

The disease in which inflammation in spinal cord and large joint cause is called as ankylosing spondylitis. These disease immune-mediated diseases that can cause the inflammation to the axial skeleton as well as some joint of the body like peripheral joints. Two centuries ago these Ankylosing spondylitis (AS) disease was firstly described in India. The people who are around 50 year old, in those people this Ankylosing disease mainly observed in the males people are greatly affected by this disease as compare to female. It is a long standing inflammatory autoimmune disease. Mostly severe, chronic pain, and in more advanced cases, spine fusion can cause. The cells of Immune system and natural cytokines have been suggested to be critical in the pathogenesis of AS, especially in the human leukocyte antigen and the interleukin axis. The pathogenesis of this ankylosing spondylitis disease is not found clearly. In all over India around half percent of patients which is affected by these disease they shows the bowel inflammation in bowel and hence it is confirmed that the real origin of the disease could be in these stomach of our body. Finally in this review, we conclude that the treatment of AS includes Non-steroidal anti-inflammatory drugs which importantly reduced inflammatory indication as well as are present initial drug treatment for these disease.

KEYWORDS: HLA-B27, ankylosing spondylitis, Functional limitation, sacro-iliac joint, Inflammation & Spinal cord.

I. INTRODUCTION

Inflammatory stiffening of the spinal cord, affecting in particular the cartilaginous joints of the spinal cord and the sacro-iliac joints of body this disease is done. In the advanced form there is ligaments become stiff and fusion of spinal cord with a bending of these part of spinal cord.^[1] In Ankylosing spondylitis it is found that it has been trouble humidity as far back as ancient Egypt country .All over the 1900s, further understanding about the disease was popular including its hereditary nature. It firstly effects on the young adults, with a higher incidence in patients who are younger than 45 years old. As the disease .It can result in total fusion of the axial skeleton, can reduced the physical function and movement of spinal cord if disease can shows the progress. In this disease Long time pain, this can show restrictive lung function and can cause the respiratory failure. Ankylosing spondylitis is not only specific for the spinal cord in that the peripheral joints of body can be affected, and in organs such as the eyes, heart, and lungs can be shows symptoms. Patients can also accuse of symptoms like fatigue or weight problems in body.^[2] In latest medicine AS is a long time occurred systemic, inflammatory, rheumatic disease of uncertain etiology it can primarily affecting the axial skeleton. In latest

medicine related to these disorder is long-term use of non-steroidal anti-inflammatory drugs and a life-long program of property or daily, regular exercises has been the mainstay of these symptom reduced for almost six decades.^[3]

In Several clinical result of these disease indicate that the large size of hip can increases the burden of AS and not positively impacts on its prognosis. The hip arthritis can be associated with the more severe spinal involvement. If the mainly basic and central function of the hip, impairment of hip-function is shown, then it is related to functional impairment in patients with this disease.^[4] This type of diseases shares the genetic, radiographic as well as clinical features which may be increased prevalence of acute anterior uveitis (AAU), the psoriasis and inflammatory bowel disease, the so-called extra-articular manifestations.^[5] On the basis of result by Vladimir Bekhterev, Adolph Strumpell, and Pierre Marie these scientists, until 19th century that the disease could be perfectly diagnosed, these are the time of Galen who is 1st pharmacist. The HLA-B27 allele is having a strong association with this disease when any other genes of body play parts in its development.^[6]

Among these study of disease it is result that the, may be heterogeneity in the patients examine. In specific, risk factors for functional limitation able to differ on the basis of the duration of AS. Functional limitations in initial stages of these AS disease may be closely related to the symptom severity and factors that modify the symptoms of AS. When functional limitations in long-standing AS can be more related to the factors whose effects cumulate over time and that reflect fusion of spinal cord and long-term structural damage. Finally when complete these study which is cross-sectional study, we conclude that demographic as well as clinical risk factors for functional limitations in the lots of patients which having the AS symptoms for 20 years.^[7] Ankylosing spondylitis is not like as rheumatoid arthritis, when they do have similarities in symptoms or any other part of AS. Ankylosing spondylitis exists a spectrum of clinical presentations both axial as well as appendicular skeletons of human body.^[1]

II. HISTORY

Around the 21-year-old male patient, who was perfectly normal previously one month and before 15 days of disease, suddenly in body developed back pain at lower side of spinal cord and particularly on the left side of body which progressively worsened over the following 2 days. On the third day he was not able to get up from bed, and was taken to an orthopedic surgeon who diagnosed the disease and injury related to the musculoskeletal system. There was no any other feature in history like a vomiting, pain in abdominal cavity, or skin problem of trauma or other major medical or surgical conditions. The patient's hunger was reduced and was shown by constipation.^[3]

III. PATHOPHYSIOLOGY

The pathogenesis of AS is not clearly understood by scientists. The Immune related mechanisms are guide by inflammatory histology, increased the level of serum of IgA antibody and acute phase reactants, and the close relationship between HLA-B27 and Ankylosing spondylitis. No any single agent has been identified as the cause of the disease, but there is shows the interrelationship between AS, ReA, and IBD which says that enteric bacteria may play an important role in these pathogenesis of the disease.^[9] HLA-B27, a surface antigen included in class 1, is found in greater than equal to 89% of AS patients. HLA-B27 binds to the antigenic peptides for presentation to cytotoxic T cells, thus enabling normal function of the immune response in targeting pathogens like a the influenza virus. Syndesmophytes develop inside ligaments, as consequences of new bone growth⁸ which are considered a hallmark radiological feature of this disease. In these disease at final stage observed that there is complete fusion of the axial skeleton.^[2]

IV. SYMPTOMS

The symptoms of these AS disease firstly observed in late adolescence or may be in the people who get early adulthood. The symptom is started with mainly the dull pain that is indirect in onset. The pain is generally felt deep in the buttock as well as in the lower lumbar regions.^[8] the most common symptom is anemia or low iron mainly observed in these AS. Initially the signs and symptoms of Ankylosing spondylitis disease is might include pain, stiffness in lower back and hips of body as well as specially in the morning and after period in activity in day. Also pain in neck and fatigue, dizziness are commonly observed. Overtime symptoms might worsen improved or stop at irregular interval.

In that the most affected area of body is

- Joint between the base of your spine and your pelvis.
- The vertebrae in your lower back.
- The places where your tendons and ligaments attached to bone, mainly in your spin but sometime along the back of your heel.
- The cartilage between your breast bone and ribs.

V. DISCUSSION

There is no any particular test which is use for the diagnosis of Ankylosing spondylitis, but the X-ray as well as MRI can shows the proof of swelling of the sacroiliac joint which is present between the sacrum and the ileum in person.^[9] The diagnosis of this disease before the presence of irreversible damage is very difficult. There were several years may pass to find out the symptoms and definite diagnosis of these disease. Low awareness between those non-rheumatologists of Ankylosing spondylitis and the fact that radiological evidence of sacroilitis is a late feature of the disease is most likely.

This is unfortunate, as earlier diagnoses might potentially decreased the crippling effects that can be produced.^[8] In 2006, the great scientist Rudwaleit et al. defined the diagnostic criteria for inflammatory back pain in patient's body more than 50 years with long term back pain that may lead to an earlier diagnosis of this disease. These included morning stiffness may be less than 30 min, rise in back pain with only exercise but not the rest of body awakening due to the back pain during the second half of the night only, and alternating buttock pain.^[10] Magnetic resonance imaging is through its ability to found inflammatory changes in the bone and soft tissues of body, the most sensitive imaging modality for recognizing early in spinal cord or some joint changes in this ankylosing spondylitis disease. If the spinal cord is structurally damage then the ankylosing spondylitis is observed by MRI. The diagnosis of this disease is mainly based on the radiographic technique observed by lateral intensity and unilateral severe inflammation of one or both of your joint which is present between the spinal cord and pelvis.^[11]

VI. MONITORING

Computed tomography (CT) does not show any useful role in monitoring these disease activity or damage of the spinal cord. CT does not show any active inflammation and the related high radiation dose of CT.^[11] Imaging of the spinal cord plays an important role in diagnosis and classification but also in monitoring of patient with axial SpA. Spinal radiographic progression seems to occur linear during the course of disease in the majority of patient.

VII. COMPLICATION

If these ankylosing spondylitis disease is left not treated then some complication are occur. These are difficulty in breathing and heart, lungs as well as bowel damage. In that eye irritation definitely found. In that disease most serious complication may occur is spinal cord get fracture. And other complication included is trauma to the rigid, fragile spinal column which can be cause severe damage. The cervical spinal cord is the most significant site; fractures at this site can cause the quadriplegia. Inflammation to the prostate gland is highly common in among the men with this disease. Appropriateness in aorta and in cardiac muscle disturbances can occur in patients with long term disease. Pulmonary fibrosis is very rare complications of this disease.^[8] Fusion can become stiff your rib cage of body restricting your lung capacity. For these disease the main complication may be include the eye inflammation (uveitis). One of the most common complications of this ankylosing spondylitis disease is eye inflammation that can be because rapid onset eye pain, sensitivity to light and in some cases vision may be loss.^[13]

VIII. TREATMENT

There is no any special treatment for ankylosing spondylitis but, treatment is available to help relieve the symptoms. Management as well as treatment of this disease can be challenging. Regular treatments for inflammatory arthritis less evidence for effectiveness in AS disease. Most of the patients of this disease are young and are in work in some cases, patient may have to leave their job. Having a long time illness can cause the depression and anxiety. Guidance and psychological support may be necessary if the patient is suffering during depression or low mood can cause their illness. Swelling in the knee joint subsided, but the patient started to develop the skin problems. Finally in this way, he was managed for a period of 1 month, then after which he was able to walk without support, and the severity of the pain get decreased.

IX. PREVENTION

Firstly this disease can be prevented by doing regular exercise, proper stretching and do weight maintaining activity these can protect against joint damage.

X. CONCLUSION

Ankylosing spondylitis is an autoimmune inflammatory disease that causes severe spinal pain and abnormality,

and can be associated with extra-articular and systemic features. If these AS disease unable to treat properly, then it can cause in chronic pain, reduced movement of spinal cord, and reduced quality of life. Patients complain of inflammatory-sounding back pain in body and may have other spondyloarthritis features.

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