Pitfalls in the diagnosis of Ankylosing Spondylitis in Babylon governorate in Iraq

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Abstract

Background: patients with Ankylosing Spondylitis (AS) usually suffer from diagnostic delay. having symptoms up to several years before correct diagnosis, leading to psychological agony, physical and lead to load on healthcare system.

Objective: To measure the period of diagnostic delay of AS and explore the main causes of diagnostic delay.

Patients and Methods: A cross sectional study of forty –eight consecutive patients (41 males, 7 females), the mean age 34.4 ±8.54 years (ranging from 18 to 58 years) with Ankylosing spondylitis who met the criteria of modified New York 1984 and which have been conducted at Merjan teaching hospital, Rheumatologic and rehabilitation out-patient department in Babylon from period January 2018 to July 2019. The diagnostic delay has been defined as the interval between appearance of early symptoms and the diagnosis of Ankylosing spondylitis was measured (in years) for each patient. Full detailed history of each patient about her/his journey of previous diagnosis and treatment measures were recorded.

Results: The mean of diagnostic delay was 8.47±6.15 years in males, and 10.1± 8.62 years in females. The most common missed diagnoses contributing to delay diagnosis of AS were: non-specific back pain (22 patients, 45.8%), degenerative disease (lumbar spondylosis) (10 patients, 20.8 %) disc prolapse (12 patients, 25%), sacroiliac sprain (2 patients 4.16%), rheumatoid arthritis (1 patient, 2.17%), and chronic brucellosis (1 patient 2.17%).

Conclusion: Most patients had obvious diagnostic delay prior to definite Ankylosing spondylitis diagnosis which could have been avoided with earlier intervention.

Keywords: Spondarthropathy (SPA), Ankylosing Spondylitis (AS), Diagnostic Delay (D.D)

Introduction

Spondyloarthropathies (SpAs) constitute a diverse group of interrelated inflammatory rheumatological disorder with overlaping in clinical features and sharing common criteria and striking association with HLA-B27. This group include: Axial spondyloarthritis, Ankylosing Spondylitis (AS), Reactive arthritis, Psoriatic arthropathy, Arthritis with IBD [1 ,2]

In the early stages of the Ankylosing Spondylitis (AS), iliosacritis is the hallmark of AS. The HLA B27 is strongly associated with AS (> 95%). [1, 3]

Patients with AS usually suffer from delay in diagnosis. The delay in diagnosis would be combined with poor prognosis, increases in disease activity, physical dysfunction, and massive organic changes. [4]

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However, in spite of extensive work on AS, the delay in diagnosis is still evident and in deed, is one of the longest among rheumatalogical disorders. Many patients may undergo un needed investigations and take inadequate management for their disease. To develop a precise clinical guideline that reach the diagnosis early, consistency of these factors might lead to the key .[5, 6,] and [7]

The application of the Assessment of SpondyloArthritis International Society (ASAS) classification criteria for both axial and peripheral SpA has been reduce chances of missed diagnosis and consequence of diagnostic delay. [1]
Our goal in this study was to measure the diagnostic delay in AS,to locate whether differences connected to sex persevere and to explore main causes of diagnostic delay

Patients and Methods

A forty –eight consecutive patients (41 males, 7 females mean age 33.7±4.54 years;) with Ankylosing spondylitis who met the criteria of modified New York 1984 and which have been conducted at Merjan teaching hospital, Rheumatologic and rehabilitation out-patient department/Babylon from period January 2018 to July 2019. The definition of diagnostic delay is the interval between the occurrence of first manifestation and the true diagnosis of Ankylosing spondylitis was measured for each patient.

Full detailed interview of each patient about her/his frustrating journey of previous therapy was obtained. Informed consents were obtained from all patients and has been approved by the local ethics committee.

A structured and pre-designed form was applied for collecting data which refers to the disease details and recording clinical examination by the specialist. These data included age of the patient, patients sex, age at disease onset, age at first diagnosis, peripheral arthritis, enteritis, previous therapies and all diagnostic measures.

Results:

All patients (forty –eight consecutive patients with AS (41 males, 7 females) mean age 34.4 ±8.54 years (ranging from 18 to 58 years) were enrolled and in the current study). Fig. 1. The mean of diagnostic delay was 8.47± ±1.81 in males, and 10.8± 3.45years in females. Table 1.

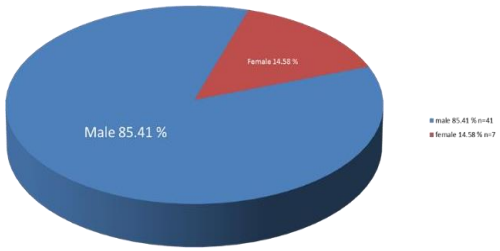

Figure 1. Distribution of patients according to gender

Table 1. Distribution of patients according to gender, age (year), mean of diagnostic delay (DD) (year)

Gender	No. of patients	Mean age	Mean DD	
Female	7	40.71±9.10	10.8± 3,45	P value=0.118
Male	41	32.6 ± 4.90	8.41±1.81	

The main missed diagnosis contributing to delay diagnosis of AS. are:

non-specific back pain (22/48, 45.8%), degenerative disc disease (1 0 /48 20.8 %), disc prolapse (12/48,25%) , Rheumatoid arthritis (1/48,2.17%)

sacroiliac sprain (2/48 4.16%), chronic brucellosis (1/482.17%). Fig.2

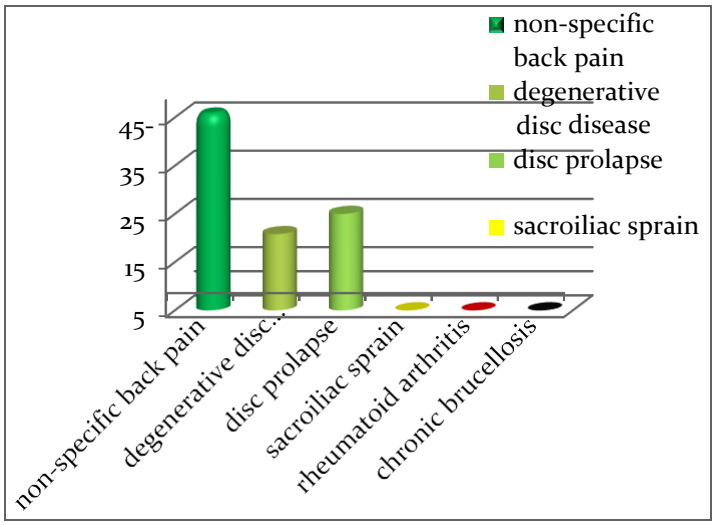

Figure 2. percentage of patients according to cause of diagnostic delay

Discussion:

Ankylosing spondylitis (AS) is a chronic inflammatory rheumatologic disease characterized by iliosacral joint and vertebral column involvement of ascending pattern. Peripheral joint arthropathy and extra-articular features can be other associated manifestations which can result in physical, psychological, social and economic impacts. [8] Diagnosis of this disease is usually delayed in all parts of the world. Diagnostic delay result in poor prognosis. AS has a long term delay in diagnosis among other rheumatologic diseases, nearly 5-10 years [9]
In the current study the diagnostic delay was 8.47±6.1 in males, and 10.1± 8.6 years in females. This results are in consistence with study in India which showed delay in diagnosis was 6.9 ±5.2 years [10] and with recent study in UK

when the average of diagnostic delay was ranging from 7.4 ±8.4 years [11]

The current study showed that the period of diagnostic delay is greater in females than males' patients. This fact is consistence with many studies [12]

It can take two or even more years longer to diagnose AS in women than men. This fact can be explained by: beliefs that the disease is primarily affects men., given a wrong diagnosis as "non-specific" back pain, better spinal mobility than men, the slower development of radiological changes in women and also due similarity to fibromyalgia. [12] The factors contributing to delayed diagnosis are many of these are: Lack of patient a wariness. Patients switching from doctor to doctor 'drug-seeking patients. Most of patients in current study described long, diagnostic journeys which involved many clinicians who concluding that complaints were psychosomatic in origin. Especially when the symptoms flare and remit and people might ignore symptoms or their appointment during remission, or when Symptoms so insidious and mild and improved with working.[4] Other factor, many primary care physician having no or lacking idea regarding inflammatory origin of back pain of AS which contribute to missed diagnosis.

Back pain of Axial sponyloarthropathic origin remains a relatively very uncommon cause of back pain (global prevalence is 0.32% - 0.7%) [13] when compare with common non-specific back pain. Up to 80% public revealed backache at a time in their lives [1]. This fact makes many clinicians to missed diagnose the inflammatory causes of back pain like AS. Moreover, MRI scans routinely requested for nonspecific back generally does not include scanning the sacro-iliac joints leading to more missing of early detection of AS. Furthermore, the presence of intervertebral disc bulging making a wrong diagnosis of disc prolapse leading to delay of diagnosis of AS.[14]

Many instances an expert radiologist is needed for proper interpretation of MRI of sacroiliac joints. Since inflammatory like changes can occur in nonspecific back pain or even in normal individual and sometimes there is a difficulty in identifying actual active inflammatory iliosacritis. In the past, diagnostic delays associated to the sort of late presentation of radiographic iliosacritis which considered a corner stone for AS diagnosis [15] MRI Restriction access may be another contributing to delay diagnosis of early sacroiliac inflammation, which not evident by plain radiography in early stages of the disease. Other contributing reason for diagnostic delay is atypical presentation of AS. Patients with AS may present with peripheral arthritis before axial spine involvement and might miss diagnosed as rheumatoid arthritis leading to delayed diagnosis of AS. [1]

Conclusion:

Many factors were attributing to diagnostic delay of AS making patients missing the opportunity of early management and as a result has bad prognosis with physical, psychological and Economic impacts with impaired quality of life. The early management was less important in the past, due limited therapeutic options. This fact has changed with the development of tumor necrosis factor alpha inhibitor (TNF-α) and other biologic therapy which used effectively for management of axial SPA including early AS. For these reason the primary care physician must aware of Assessment of Spondylitis International Society (ASAS) criteria which allowing early diagnosis of Spondyloarthropathy even in the lack of radiographic changes.

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