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Case Report

Classical Rheumatoid Arthritis Revisited

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Abstract: Rheumatoid arthritis is a chronic autoimmune inflammatory arthritis. It is the most common inflammatory arthritis affecting worldwide. Nearly 1 % of the world is affected with this debilitating disease. We are reporting one such case of rheumatoid arthritis with classical skeletal manifestations. A 65 year old man presented with history of progressive breathlessness and pain on the left side of the chest. He also had swelling and pain of the joints of hand, foot and knee on both sides since last 12 years. He also had developed deformities of hands and toes. On Examination left sided mild to moderate pleural effusion was diagnosed and diagnostic aspiration showed rheumatoid etiology. Classical deformities of hand are shown in this case report.

INTRODUCTION

Rheumatoid arthritis is a chronic autoimmune inflammatory arthritis characterized by severe inflammation in joint and also extra-articular manifestations. Notable are the rheumatoid nodules, vasculitis, Felty's syndrome, pyoderma gangrenosum, interstitial lung disease.[1]Other extra-articular manifestation include affection to heart, eye, renal, nervous system, gastro-intestinal sytem.[2]

We are reporting one such case of rheumatoid arthritis with classical skeletal manifestations.

CASE REPORT

A 65 year old man presented with history of progressive breathlessness and pain on the left side of the chest. Pain was sharp and pleuritic character initially. He was a farmer by occupation and had a history of tobacco smoking since 40 years. He also had swelling and pain of the joints of hand, foot and knee on both sides since last 12 years. He also had developed deformities of hands and toes. He had morning stiffness associated with the joint swelling and worsened during acute exacerbation of swelling of joints. On examination his vitals were normal, grade III clubbing was present and he had dull note on percussion over mammary area, infra-axillary area and infra-scapular area on left side of the chest. Chest radiograph showed left mild to moderate pleural effusion which was later confirmed by Ultrasonography of Left Thorax. Diagnostic aspiration of pleural fluid revealed thick yellow pleural fluid. Pleural fluid analysis showed exudative pleural fluid with protein of 4.2gm/dl, glucose of 16mg/dl and cell count of 600cells/mm^3. Hand radiographs were also taken.

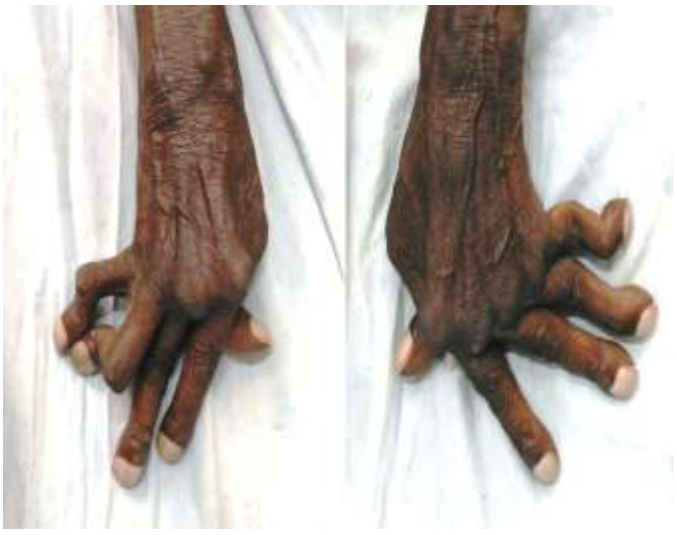

Figure 1: Clubbing and Deformities of both Hands

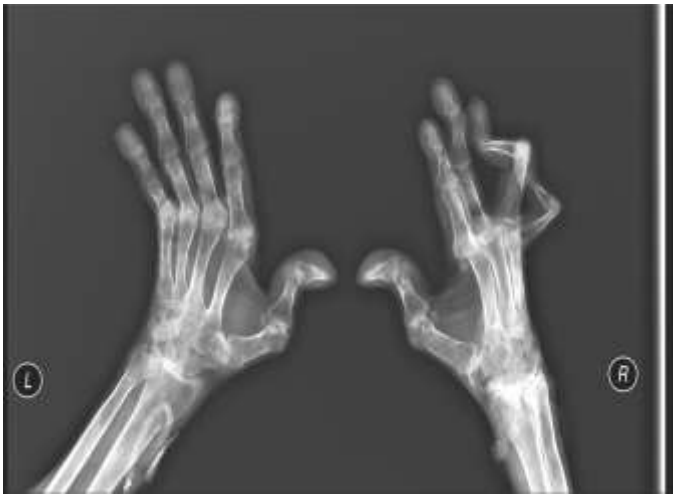

Figure 2: Hand Radiograph Oblique view

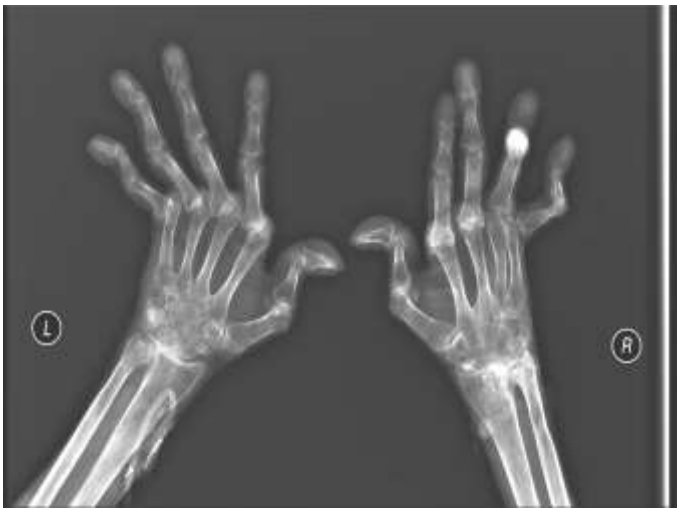

Figure 3: Hand Radiograph Anteroposterior View

DISCUSSION

It is the most common inflammatory arthritis affecting worldwide. Nearly 1 % of the world is affected with this debilitating disease. It affects the synovial joints, subchondral bone marrow, and surrounding fat tissue, is characterized by progressive joint inflammation with disability.[3]

Rheumatoid arthritis also affects kidney causing rheumatoid nephropathy. The pathology of rheumatoid nephropathy involves glomerulonephritis and amyloidosis and acute or chronic interstitial nephritis[4]

Rheumatoid arthritis also causes non specific interstitial pneumonia changes in the lungs. RA associated interstitial lung disease has Usual Interstitial Pneumonia pattern.[5]

Presently it is unknown about how rheumatoid arthritis autoimmunity is initiated, recent findings suggest the occurrence of this autoimmune mechanism long before any clinically detectable disease onset. It is hypothesized that autoimmunity of rheumatoid arthritis begins in the mucosal membranes of gastrointestinal tract. [6]Furthermore the relationship between smoking and anti-citrullinated peptide antibody is elucidated and citrullinating oral bacteria are hypothesized as causative factor in the disease pathogenesis.[7]

Rheumatoid arthritis causes progressive autoimmune inflammatory destruction of synovial joints and other sites(extraarticular manifestations). The disease can affect any joint but it is commonly found in metacarpophalangeal joints, proximal interphalangeal joints, metatarsophalangeal joints, wrist joints and knee joints. Clinically characterized by jont swelling, tenderness, morning stiffness, restricted motion in the affected joints. Other joints affected distal interphalangeal joints, sacroiliac joints and spine are involved rarely. Acute inflammation is often associated with fever, weight loss, fatigue and malaise. [8]

Early changes at the wrist joint include pain, irregular, multilobular, boggy swelling of wrists with prominence of styloid. Metacarpophalangeal joints become weak subsequently leading to flexion and ulnar deviation of fingers. Flexion of MCP and DIP joints with hyperextension of PIP joints is termed Swan Neck Deformity. Mallet finger deformity is due to incomplete extension of distal phalanx. Boutonniere Deformity is due to incomplete extension of PIP and hyperextension of DIP joints. Thimb undergoes flexion at MCP joint and interphalangeal joint undergoes heperextension with impaired opposition of thumb. [9]

Laboratory findings include positive testing for rheumatoid factor, anti-cyclic citrullinated peptide antibody (anti-CCP antibody), raised erythrocyte sedimentation rate and raised c-reactive protein. [10]

Nevertheless, aggressive treatment of rheumatoid arthritis and control of inflammation would result in preventing the disability and better outcomes. Since last decade, scientific developments have taken place in the better management of patients with rheumatoid arthritis.

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