

A STUDY OF ROLE OF PLAIN RADIOLOGY IN DIAGNOSIS OF DEGENERATIVE ARTHRITIS

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ABSTRACT

This study was carried out to correlate the clinical findings with radiological findings, to see the incidence of age, sex and particular joints involved in degenerative arthritis patients. The study was conducted in 20 outdoor patients of Mayo Hospital, Lahore. The age ranged from 40 to 70 years with mean age of 55 years. Ten (50%) each were male and female. Complaints of pain, stiffness and limitation of movements in affected joints was present in all cases along with swelling and tenderness. Ten (50%) of the 20 patients had involvement of knee joint, 5 (25%) of cervical spine, 2 (10%) of lumbar spine, 1 (5%) of shoulder joint, 1 (5%) of wrist joint and 1 (5%) of ankle joint. All 20 (100%) patients had disc/joint space narrowing, marginal sclerosis/subchondral sclerosis. Nineteen (95%) had osteophyte formation and 1 (5%) had cyst formation.

It is concluded that degenerative arthritis occurs almost equally in males and females above 40 years with complaints of pain, stiffness and limitation of movements. Knee joint is the most commonly involved joint in this disease. Radiology can play a vital role by diagnosing the disease process early and thus to preventing disability due to its advanced stage and in reducing socio-economic losses to the individual and to the nation.

INTRODUCTION

Degenerative arthritis (osteoarthritis) is the most common of various articular disorders afflicting man. Degenerative arthritis may be primary or secondary to trauma, avascular necrosis, Rheumatoid arthritis, endocrine disorders). In degenerative arthritis there is destruction of articular cartilage. The disease involves both large and small joints of the limbs and spine.

The observed increased frequency and severity of disease in older population is the result of prolonged exposure to pathophysiological processes that occur much earlier in life. The disease usually presents in patients above 40 years of age but it may appear earlier.

It results in major loss of time off from work and carries with it a significant socio-economic impact. The present therapy remains symptomatic rather than

curative. Radiology can play an important role in early detection of degenerative arthritis.

AIMS AND OBJECTIVES

Aims and objectives of this study were as follows

1. To correlate the clinical features suggestive of degenerative arthritis with radiological findings.
2. To study the age and sex incidence in patients of degenerative arthritis.
3. To study the incidence of involvement of different joints in this disease.

MATERIAL AND METHODS

The patients were collected from Orthopaedic outdoor of Mayo Hospital Lahore. A total of 20 patients were included in the study, out of which 10 (50%) were male and 10 (50%) were female. The

age range was from 40 to 70 years with mean age of 55 years.

These cases were either referred by the general practitioners or had come directly to the consultants of Mayo Hospital, Lahore with complaints of pain, stiffness, joint swelling and limitation of movements. All cases were referred to the radiology department for relevant X-rays.

As a routine at least two views, antero-posterior and lateral were done for these patients. In some patients additional views were also taken. The selected patients were carefully examined by taking detailed history from the patient.

RESULTS

Among the patients coming to the outdoor of Mayo Hospital Lahore with joint pains, 20 patients were confirmed as having radiological findings suggestive of degenerative arthritis. Sex incidence is equal. Ten (50%) patients were male and 10 (50%) were female. Three (15%) patients were in 40-49 years age group, 7 (35%) in 50-59 years age group and 10 (50%) were 60 years of age. The study shows that patients in the last group are more affected with this disease.

Pain was presented in 10 (50%) patients in knee joints, 5 (25%) in cervical spine, 2 (10%) in lumbar spine, 1 (5%) in shoulder joint, 1 (5%) in wrist joint, 1 (5%) in ankle joint. Twenty (100%) patients had stiffness of affected joints after immobility (but not morning stiffness) and pain on motion of joints. Limitation of joint movement was seen in 16 (80%) patients. Fifteen (75%) patients had swelling of joints, 20 (100%) had tenderness of joints and 14 (70%) had deformity of joints. Only one case (5%) had Heberden's nodes at distal interphalangeal joint. Two (10%) had a with low haemoglobin, 3 (15%) had positive Rheumatoid factor.

Incidence of joint involvement in this study was knee joint 10 (50%), spine 5 (25%), lumbar spine 2 (10%), shoulder joint 1 (5%), and wrist joint 1 (5%) ankle joint 1 (5%) and wrist joint 1 (5%). Radiological signs as joint space/disc narrowing seen in 20 (100%), marginal sclerosis/sub-chondral sclerosis in 20 (100%), osteophyte formation in 19 (95%) and cyst formation in 1 (5%). In knee joint involvement all the 10 (100%) patients had joint space narrowing, sub chondral sclerosis and osteophyte formation. In cervical spine all 5 (100%) patients had disc space narrowing, osteophyte

formation and marginal sclerosis. In lumbar spine all 2 (100%) patients had disc space narrowing, osteophyte formation and marginal sclerosis.

DISCUSSION

Degenerative arthritis, as the name shows is disease of old age. Patients above 40 years who suffer from "wear and tear" of the body are involved in this disease. Below 55 years female involvement is more but above that male incidence is more. Patients above 60 years are more affected by this disease. The knee joint alone is involved in 10 (50%) cases and is the most affected joint. Cervical spine 5 (25) and lumbar spine 2 (10%) are second and third most involved joints.

Result of this study is that male and female incidence is equal. It involves weight bearing joints of the body above 40 years of age. Involvement is asymmetrical. In later stages with advanced of disease, severe disability results in patients. This is a progressive joint disease and its high morbidity requires considerable resources in terms of diagnosis, drugs and surgery.

In our country many patients with degenerative arthritis do not seek specialist advice from the hospital. They are treated by the general practitioners. The patients come to the hospital only when the disease is severe and disability is already present. The patients seen in hospital outdoor have more active disease and majority develop severe destructive progressive disease.

If the patient is diagnosed early with the help of radiology, then debility can be avoided hence reduce the disability of the patient and minimise socio-economic losses to the individuals and to the nation.

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