Original Article

Pattern of Musculoskeletal Disorders among Diabetic Patients Attending The Department of Physical Medicine and Rehabilitation in a Tertiary Care Hospital

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Abstract

Background: *Disorders of musculo-skeletal (MSK) system are very common scenario watched in diabetic patients and is a major cause of morbidity, mortality and hospitalization.* ***Objective:*** *The present study to see the pattern of MSK disorders among the Bangladeshi diabetic patients.* ***Materials & Methods:*** *This is a cross-sectional study carried out at the department of Physical Medicine and Rehabilitation in Thengamara Mohila Sabuj Sangha (TMSS) Medical College Hospital, Bogura for the period of one year from February 2019 to January 2020. A total of 450 diabetic patients with MSK disorders were included in this study.* ***Results:*** *A total of 450 patients with MSK disorders were studied. Out of them 208 (46%) were males and 242(54%) were females.31.5% were between the age group of 41-50 years and 28.9% was between 51-60years.Majority were housewives (51.2%) followed by cultivator(16.2%).Degenerative joint diseases were more common (31.4%) than inflammatory arthropathies (19.3%).Lumbar and cervical spondylosis constituted about 31.4% of all disorders& 22.7% presented with OA knee whereas 15.6% presented with rheumatoid arthritis.* ***Conclusion:*** *Degenerative disorders of the MSK system are more common than the inflammatory ones amongst the diabetics.Maximum patients were having OA of knee, lumbar spondylosisand soft tissue rheumatism.*

Key words: *Musculoskeletal (MSK) Disorders, Diabetic Patients.*

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Introduction

About 3-7% of the adult population are suffering from diabetes across the country. Diabetic patients are usually present with various MSK disorders. Musculoskeletal disorders include a wide range of inflammatory and degenerative conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels. These include clinical syndromes such as tendon inflammations and related conditions (tenosynovitis, epicondylitis, bursitis), nerve compression disorders (carpal tunnel syndrome, sciatica), and osteoarthrosis.[1,2] There are shared genetic links between type 1 diabetes and other autoimmune diseases such as rheumatoid arthritis . Genetic links between the organ-specific autoimmune conditions (HLA DR3/DR4 tissue antigens) explain the familial clustering of rheumatoid arthritis and type 1 diabetes.[3] The exact pathophysiology of most of these musculoskeletal disorders remains obscure; however, connective tissue disorders, neuropathy or vasculopathy may have a synergistic effect on the increased incidence of musculoskeletal disorders in DM.[4] Adhesive capsulitis of shoulder joint is frequently found as a complication of diabetes.[5,6] Trigger finger(catching and snapping of the fingers) and neurological complications involving joints (Charcot's arthropathy) are frequently seen in diabetic patients.[7,8] The aim of this study was to find out the pattern of MSK disorders among the Bangladeshi diabetic patients attending the Department of Physical Medicine and Rehabilitation of Thengamara Mohila Sabuj Sangha (TMSS) Medical College Hospital in Bogura.

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Materials and Methods

This is a cross-sectional study conducted at Physical Medicine and Rehabilitation department of TMSS Medical College Hospital over a period of one year from February 2019 to January 2020. Data was analyzed using Microsoft excel and statistical package for social software (SPSS). Patients were categorized according to the criteria of American Rheumatology Association based on history, clinical examination and relevant investigation.

Results

A total of 450 patients with MSK disorders were studied. Out of them208 (46%) were males and 242(54%) were females (Figure-1).

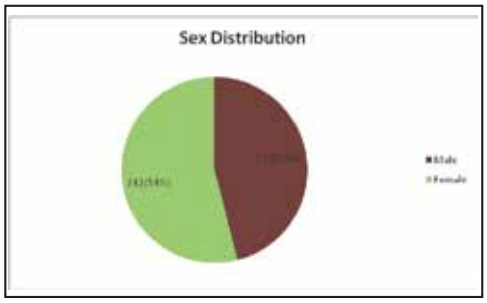

Figure 1: Sex Distribution

Out of 450 patients, 31.5% were between the age group of 41-50 years and28.9% was between 51-60years (Figure-2).

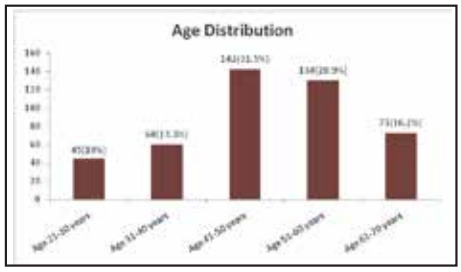

Figure 2: Age Distribution

Majority were housewives (51.2%) followed by cultivator(16.2%), service holders (16.1%), businessmen (7.9%) and teachers (3.1%) (Figure-3).

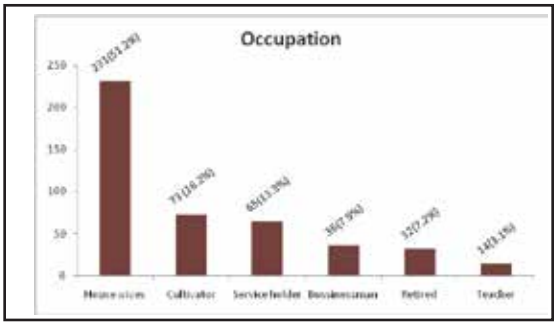

Figure 3: Occupation

Lumbar and cervical spondylosis constituted about 31.4% of all disorders. Details of the common MSK disorders are presented in (Figure-4)

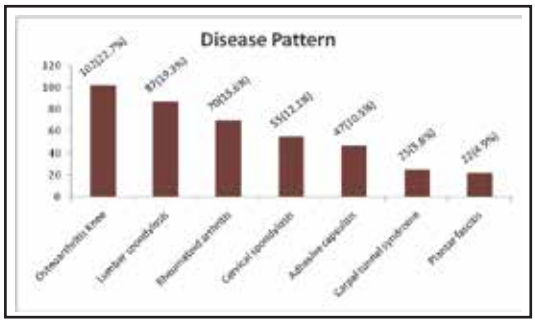

Figure 4: Disease Pattern

Discussion

In this study a total of 450 patients with MSK disorders were studied. Out of them 208 (46%) were males and 242(54%) were females.Most of the subjects are between 41-60 years of age like 31.5% were between the age group of 41-50 years and 28.9% was between 51-60years.Majority were housewives (51.2%) followed by cultivator (16.2%), service holders (16.1%), businessmen (7.9%) and teachers (3.1%). In the present study conducted by us and as well as in other studies, degenerative disorder of the locomotor system was found to be a common (50%) condition. Rheumatoid arthritis was the commonest inflammatory arthropathy in the present series which was also reported by Alam et al.[9,10] Osteoarthritis of knee was the most frequent MSK complain (22.7%) in our study which was similar to the findings of Bjella et al.[11] Lumber spondylosis and cervical spondylosis were the commonest (31.4%) in our study which was close the findings of Khan MSZ et al.[12] Soft tissue rheumatism, for example Adhesive capsulitis (10.5%) and planter fasciitis(4.9%) are also very common among diabetic patients. Among various entrapment neuropathies, carpal tunnel syndrome (5.6%) is highly prevalent in diabetics. Musculoskeletal disorders (MSDs) among diabetics are widespread in many countries, with substantial costs and impact on quality of life. Accurate data on the incidence and prevalence of musculoskeletal disorders are difficult to obtain, and official statistics are difficult to compare across countries. Diabetes mellitus accounts for a number of vascular complications, which impair patients' survival. Whilst vascular complications are recognized as the principal cause of morbidity and mortality in diabetes, it is often forgotten that diabetes is a multi-system disease. Despite the increased prevalence of musculoskeletal disorders amongst the diabetic population, this area is frequently neglected in the clinical setting.[13] It has been suggested that health care providers should offer counseling to their patients to promote physical activity, a healthy diet, and smoking cessation as part of the preventive health measures.[14] It is hoped that through appropriate counseling regarding a healthy lifestyle, health care providers may help to reduce the incidence of the musculoskeletal effects of DM.

Conclusion

In this study we know that degenerative disorders of the MSK system are more common than the inflammatory ones amongst the diabetics. Controlled glycemic status, modification of lifestyle and routine screening for MSDs can minimize the sufferings- special attention is needed among the health care providers in this regard.

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