Research Article

www.ijrap.net

PREVALENCE OF MUSCULOSKELETAL DISORDERS IN PATIENTS VISITING GOVERNMENT UNANI HOSPITAL AND AYUSH CENTRES IN KASHMIR, INDIA: A PRELIMINARY STUDY

Abdul Kabir Dar*, Azad Hussain Lone
Directorate of Indian Systems of Medicine, Srinagar, Jammu and Kashmir, India

Received on: 02/05/13 Revised on: 20/06/13 Accepted on: 10/07/13

***Corresponding author**
E-mail: drkabir@gmail.com
DOI: 10.7897/2277-4343.04401
Published by Moksha Publishing House. Website www.mokshaph.com

ABSTRACT
Musculoskeletal disorders (MSDs) are soft tissue injuries that occur gradually over time and affect the muscles, tendons, ligaments, joints and nerves. These conditions develop when one or more of these tissues are used for a long period of time without adequate rest. The common MSDs encompasses low backache (LBA) and different types of arthritis, carpal tunnel syndrome etc. LBA is a common problem and the highest prevalence is seen in patients aged 45 to 65 years. Approximately 60-80 % of the world's population experience back pain at some time in their lives. Osteoarthritis (OA) is a major health problem in terms of its prevalence, associated disability and effect on the quality of life. It is the most common form of arthritis worldwide and the leading cause of mobility related disability in the elderly. The best way to prevent MSDs is to educate the people about risk factors and preventive strategies. The present study was planned with an objective to know the prevalence of MSDs and to determine the ratio of diseases in respect of Mizaj (Temperament) of the patients attending Govt. Unani Hospital Shalteng, Srinagar and AYUSH Centres in Kashmir, India. The study was an observational multi-centric cross-sectional hospital based survey. A total of 15529 patients irrespective of age and sex, attending the out-patients departments of these centres were included in the study. A pre-tested semi-structured questionnaire which was based on the demographic profile and risk factors of MSDs was administered to collect the relevant data. The results showed that overall prevalence of MSDs was 2.16 %. The mean age of patients was 42 years. The prevalent morbidities in patients were LBA (33.33 %), OA (25.89 %), Cervical spondylosis (13.69 %), PIVDP (11.01 %), Rheumatoid arthritis (4-46 %), Lumbar spondylosis (4.16 %), Frozen shoulder 1.78 %), Carpal Tunnel syndrome (1.48 %), Osteoporosis (1.19 %), Gout, Kyphoscolosis, Tennis elbow and Sciatica (0.59 %) each and Migratory arthritis and Ganglion (0.29 %) each. The prevalence was highest in patients having Balgami (phlegmatic) temperament.
Keywords: Musculoskeletal disorders, Prevalence, Risk Factors, Mizaj, Unani Medicine.

INTRODUCTION

Musculoskeletal disorders (MSDs) are soft tissue injuries that occur gradually over time and affect the muscles, tendons, ligaments, joints and nerves. These conditions develop when one or more of these tissues are used for a long period of time without adequate rest. Most work related MSDs are caused either by the work itself or by the working environment such as through sports, music or other hobbies.[1] They can also result from fractures sustained in an accident. These conditions are often focused on a joint and typically affect the back, neck, shoulders and upper limbs and less often they affect the lower limbs. The common MSDs encompasses low backache (LBA) and different types of arthritis, carpal tunnel syndrome, tendonitis, bursitis and epicondylitis (tennis and golfer's elbow) etc.[1,2] LBA is a common problem and a frequent reason for visiting a physician. The highest prevalence is seen in patients aged 45 to 65 years.[2] Approximately 60-80 % of the world's population experience back pain at some time in their lives and it is reported that due to back pain, particularly work absence, has increased significantly in the last 30 years. Only a small number of patients with LBA have a pathologically definable problem. It is usually characterized by dull, continuous pain and tenderness in the muscles or their attachment in the lower lumbar, lumbosacral or sacroiliac regions. Pain is often referred to the leg, along the distribution of the sciatic nerve. LBA accounts for 30 to 50 % of rheumatic complaints encountered by general practitioners. The common causes of LBA include faulty posture, pregnancy, prolapsed intervertebral disc, lumbosacral strain, osteomyelitis, pott's spine, osteoporosis, osteomalacia, spina bifida, rheumatoid arthritis, osteoarthritis, kyphosis, scoliosis, lardosis etc. It may also occur as referred pain in pancreatitis, cholecystitis, uterine prolapse and pelvic inflammatory disease and sometimes it is associated with depression.[3] Osteoarthritis (OA) is a major health problem in terms of its prevalence, associated disability and effect on the quality of life. It is the most common form of arthritis worldwide and the leading cause of mobility related disability in the elderly. Patients usually complain of joint pain, stiffness and swelling which are worse in the morning.[4-6] According to the World Health Organization, OA is the second most common musculoskeletal condition (30 %) after back pain (50 %). The reported prevalence of OA from a study in rural India is 5.78 %. In India, OA of knee joint is more common, more prevalent and more commonly associated with symptoms in women than OA of hip joint. OA, also known as degenerative joint disease, represents failure of the diarthrodial (movable, synovial lined) joint, which is characterized clinically by pain and functional limitations, radiographically by osteophytes and joint space narrowing, and histopathologically by alterations in cartilage and subchondral bone integrity.[1,3,7] In Unani system of medicine, the term Wajual Muffasil (arthritis) is collectively used for all joint diseases but the features of Wajual Muffasil Balghami (phlegmatic arthritis) are same as that of OA. Various renowned Unani physicians like Zakaria Razi, Ibne Abbas Majoosi, and Ibne Sina described it as the inflammation or pain of joints and

considered it as a Maddi Marz (humoral disease) caused by the accumulation of morbid humors (phlegm) or vitiated matter in the joint or its surrounding periarticular tissues. Ibne Sina in his famous treatise, "The Canon of Medicine" has mentioned that psychological factors and emotional states play an important role in the causation of this disease along with the weakness of joint.[8-10] In this system of medicine, various regimes of regimenal therapy are used for primary and secondary prevention of MSDs along with evaluation of Mizaj (Temperament) of a person. Mizaj is one of the fundamental concepts of Unani medicine and serves as a primary tool for diagnostic and therapeutic purposes. Determination of Mizaj is an important tool for prophylaxis of MSDs.[11, 12] Keeping in view all above facts, the present study entitled "Demographic Study of Musculoskeletal disorders in Patients Visiting Government Unani Hospital Shalteng, Srinagar and AYUSH Centres in Kashmir, India" is designed. The objective of the study was to evaluate the prevalence rate of MSDs in patients attending Government Unani Hospital and AYUSH Centres, irrespective of the treatment seeking for and to determine the relation of these disorders with Mizaj of the patients.

MATERIAL AND METHODS

The present study was an observational, cross-sectional, multi-centric study conducted in Government Unani Hospital Shalteng Srinagar and 10 bedded AYUSH Centres viz. AYUSH Unit, JLNM Hospital Srinagar, India, AYUSH Unit SMHS Srinagar, AYUSH Unit, Distt. Hospital Anantnag, AYUSH Unit, Distt. Hospital Shopian, AYUSH Unit, Distt. Hospital Pulwama and AYUSH Unit, Distt. Hospital Kulgam of Kashmir Division, India. Total patients of 15529 of any age group and either sex, attending the out-patients departments of these centres, irrespective of the treatment seeking for were screened. Sample size was calculated statistically taking the previous prevalence as reference. The duration of the study was from November 2012 to march 2013.. The patients fulfilling the inclusion criteria were selected after obtaining their written inform consents. Awareness based pre-tested semi-structured questionnaire was administered to each patient to collect the data on socio-demographic profile and the other data of relevance viz. past history, family history, history of trauma, obesity etc. Then final diagnosis was ascertained on the basis of subjective and objective parameters supported by assessment of Mizaj. Mizaj of every patient was assessed on the basis of Alamat Ajnase Ashra (10 determinants of temperament) mentioned in classical literature of Unani Medicine.[12-13] The collected data and results were evaluated and presented in the form of Tables in accordance to the purpose of the study.

OBSERVATIONS AND RESULTS

Table 1: Distribution of Patients according to Outcome of Screening (n=15529)

Outcome of Screening	No. of Patients	Percentage
Positive cases	336	2.16 %
Negative cases	15193	97.83 %
Total	15529	100 %

Table 2: Demographic Profile of Patients

Parameter	No. of patients (N)	Percentage (%)
Age in years	(Mean = 42 years)	%
10-20	8	2.38 %
21-30	40	11.90 %
31-40	90	26.74 %
41-50	100	29.76 %
51-60	79	23.51 %
61-70	10	2.97 %
71-80	9	2.67 %
Total	336	100
Gender		
Female	238	70.83 %
Male	98	29.16 %
Family History		
Present	51	15.17 %
Absent	285	84.82 %
Socioeconomic status		
Upper	10	2.97 %
Upper middle	82	24.40 %
Lower middle	156	51.56 %
Upper lower	42	12.49 %
Lower	46	13 %
Type of disease		
Low Backache	112	33.33 %
Osteoarthritis	87	25.89 %
Cervical Spondylitis	46	13.69 %
PIVDP	37	11.01 %
Rheumatoid Arthritis	15	4.46 %
Lumbar Spondylosis	14	4.16 %
Frozen shoulder	6	1.78 %
Carpal tunnel syndrome	5	1.48 %
Osteoporosis	4	1.19 %
Gout	2	0.59 %
Kyphoscolosis	2	0.59 %
Tennis elbow	2	0.59 %
Sciatica	2	0.59 %
Migratory Arthritis	1	0.29 %
Ganglion	1	0.29 %
Mizaj (Temperament)		
Damvi	85	25.29 %
Balghami	218	64.88 %
Safravi	27	8.03 %
Saudavi	6	1.78 %
History of Trauma		
Present	67	19.94 %
Absent	269	80.05 %
Occupation		
Students	15	4.46 %
House wife	212	63.09 %
Labour	45	13.39 %
Employees	37	11.01 %
Businessmen	27	8.03 %

DISCUSSION

Musculoskeletal disorders are soft tissue injuries that develop when one or more of these tissues are used for a long period of time. The present study was an observational hospital based survey, embarked upon to know the prevalence of Musculoskeletal disorders in patients attending Government Unani Hospital Srinagar and AYUSH Centres of Kashmir division of Jammu and Kashmir, India. A total of 15529 patients irrespective of age and sex were included in the study. Information related to demography, anthropometry, personal history and family history etc was obtained through pre-tested and semi-structured questionnaire. The demographic characteristics obtained from the study have been depicted in Tables. In the present study, as shown in Table 1, the prevalence of MSDs was found to be 2.16 %. The prevalent morbidities were LBA (33.33 %), OA (25.89 %), Cervical spondylosis (13.69 %), PIVDP (11.01 %), Rheumatoid arthritis (4-46 %), Lumbar spondylosis (4.16 %), Frozen shoulder 1.78 %), Carpal Tunnel syndrome (1.48 %), Osteoporosis (1.19 %), Gout, Kyphoscolosis, Tennis elbow and Sciatica (0.59 %) each and Migratory arthritis and Ganglion (0.29 %) each. (Table 2) This data suggests that the most prevalent musculoskeletal diseases are LBA and OA. The present observations are in conformity with the findings reported by Mohsin M *et al*[5], Savita Y *et al* [7]and Altman R *et al* [13]. Age wise distribution of diagnosed patients revealed that the mean age of patients was 42 years. Out of 336 patients, 8 (2.38 %), 40 (11.90 %), 90 (26.76 %), 100 (29.76 %), 79 (23.51 %), 10 (2.97 %), 9 (2.67 %) patients were observed in age group of 10-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80 years respectively. The maximum percentage of +ve patients were found between 41-50 years, suggesting that these diseases are more prevalent in elderly people. These findings are in accordance with the description given by Harrison's Principle of Internal Medicine.[1] Similarly sex distribution of diagnosed patients showed that out of out of 336 patients, 238 (70.83 %) patients were females and 98 (29.16 %) were males. This finding indicates female preponderance and is in accordance with findings of a clinical study by Bassiouni H *et al*[4] and Lund H *et al*.[6] No convincing data is available to demonstrate the existence of this disease among different religious communities in the society. However the predominance of Muslim patients (98 %) in present study may be absolutely due to the fact that majority of patients attending were from Muslim community which is reflected in the study. As evident from Table 2, the data suggested that that these diseases are closely associated with the socioeconomic status and are more prevalent in lower middle (51.56 %) and upper middle classes (24.40 %). This finding is in accordance with the reports suggested by Siddharth NS [2]. It is obvious from Table 2 that patients with balghami and damwi mizaj were more affected by these diseases. This finding supported the opinion of Ibn Sina[9], Ismail Jurjani[11], Razi [12] and Azam Khan[14] as this disease is common among balghami and damwi mizaj individuals. According to Unani doctrine, every person has a unique Mizaj in relation with different stages of age. The Mizaj of a person is expressed by the preponderance of a particular humour present in his body. As every person is supposed to have a unique humoral constitution; which represents his healthy state with a specific Mizaj. The Mizaj of a person is expressed as Damwi (sanguine), Balghami (phlegmatic), Safrawi (Bilious) and Saudawi (melancholic) according to the preponderance in the body. As long as these humours exist in normal quantities and qualities and in the normal region of the body, the healthy state of an individual is maintained. Any imbalance to the constitutions or changes in the quantity and quality of these humours result in diseases by altering the normal Mizaj of a person.[15,16] Regarding the presence of risk factors, the present study revealed that 15.17 % of positively tested volunteers have positive family history of MSDs. The history of trauma was found in 19.94 % of patients**.** The higher incidence of MSDs (63.09 %) was observed in house wives. This observation indicated that the disease is associated with occupation and females are generally prone to MSDs.

CONCLUSION

This study provided important information regarding the demographic profile of MSDs in patients attending Government Unani Hospital Srinagar and AYUSH Centres of Kashmir division, India. The overall prevalence of MSDs was 2.16 %. The mean age of patients was 42 years. The most prevalent morbidities in patients were LBA and OA. The study revealed that 15.17 % of patients have positive family history of MSDs. The prevalence was highest in patients having Balgami (phlegmatic) temperament. By knowing ones temperament, the risk for developing MSDs can be predicted and preventive strategies may be adopted at individual and mass levels. It can be concluded that timely and accurate surveillance of risk factors could enhance prevention of MSDs and be used to monitor its effects. However, authors recommend that more advanced studies need to be carried out.

ACKNOWLEDGMENT

Authors are highly thankful to the patients for their cooperation throughout the study. Authors are equally grateful to all heads of 10 bedded AYUSH Centers and Government Unani Hospital, Shalteng Srinagar, Kashmir, India for their persistent support.

REFERENCES

1. Kasper DL, Braunwald E, Hauser SL, Fauci AS, Longo L, Jameson L. Harrison's Principle of Internal Medicine. 16thed, Vol. 2. New Delhi: McGraw Hill; 2001. p. 2036
2. Siddharth NS. API Text Book of Medicine. 8thed, Vol 1st. Mumbai: The Association of Physicians of India; 2003. p. 1148-50
3. Haslet C, Chilvers ER, Hunter JA, Boon NA. Davidson's Principles and Practice of Medicine. 19thed. Great Britain: BPC Paulton Books Ltd; 1997. p. 406-09
4. Bassiouni H, Zaki K, Elshorbagi M, Mustapha A, Tantawi R, Ali H, *et al*. Relating bone marrow oedema to hs-CRP in knee osteoarthritis. Indian J Rheumatol 2010; 5: 11-5. http://dx.doi.org/10.1016/S0973-3698(10)60530-4
5. Mohsin M. Effects of glucosamine sulfate on primary knee osteoarthritis. Al Ameen J MedScience 2008; 1: 42-9.
6. Lund H, Weile U, Christensen R, Rostock B, Downey A, Bartels EM, *et al*. A randomized controlled trial of aquatic and land based exercise in patients with knee osteoarthritis. J Rehabil Med 2008; 40:137-44.http://dx.doi.org/10.2340/16501977-0134 PMid:18509579
7. Savita Y. Thesis submitted to Rajiv Gandhi University of Health Sciences, Effective physiotherapeutic intervention in Chronic

osteoarthritis of knee- a randomized Clinical trial, Belgaum: KLES Institute of Physiotherapy; 2006.
8. Ibne Sina, Al Quanoon Fil Tib (Urdu translation by Kantoori GH). Vol 3rd. Delhi: Idara Kitab Alshifa; 2007. p. 1119-25
9. Majusi AI. Kamilus Sana (Urdu Translation by Kantoori GH). Vol 2nd. New Delhi: Idara Kitabush Shifa; 1889. p. 503-4
10. Almaseehi IQ, Kitabul Umda Fil Jarahat (Urdu translation by CCRUM). Vol 1st, 2nd. New Delhi: Ministry of Health and Family Welfare; 1986. p. 200-201
11. Jurjani Ismail. Zakheera Khawarzam Shahi. (Urdu translation by Khan HH). Vol 2nd, 3rd. Part 8. Lucknow: Munshi Naval Kishore; 1996. p. 225-6, 637-51
12. Razi AMBZ. *Kitab Al Mansoori* (Urdu translation by CCRUM). New Delhi: Ministry of Health and Family Welfare, Govt. of India; 2002. 284,391-94.
13. Altman R, Asch E, Bloch D, Bole G, Borenstein D, Brandt K, *et al*. The American College of Rheumatology criteria for the classification and reporting of osteoarthritis of the knee. Arthritis Rheum 1986; 29: 1039-49. http://dx.doi.org/10.1002/art.1780290816 PMid:3741515
14. Khan MA. Akseer Azam; Vol 4th; Lucknow Munshi Naval Kishore; 1998. p. 13-36
15. Ahmad I. Kulliyate Asri, New Public Press Delhi; 1983. p. 34-83
16. Kabeeruddin AM. Tarjuma wa Shrah Kulliyate Quanoon, Idare Kitabul Shifa, Delhi; 1999. p. 151-154

Cite this article as:
Abdul Kabir Dar, Azad Hussain Lone. Prevalence of musculoskeletal disorders in patients visiting government Unani hospital and AYUSH centres in Kashmir, India: A preliminary study. Int. J. Res. Ayurveda Pharm. 2013;4(4):475-478 http://dx.doi.org/10.7897/2277-4343.04401

Source of support: Nil, Conflict of interest: None Declared