



Pattern of rheumatic diseases and socio- economic conditions of the patients attending at OPD of Govt. Unani & Ayurvedic medical college hospital, Mirpur, Dhaka

Md. Shazzadul Alam¹, Mohammad Abu Bin Nyeem², Md. Abdul Mannan³, BM Rabiul Islam⁴, Razat Kishor Sinha⁵

¹ Department of Public Health, University of South Asia, Bangladesh

^{2,3} Department of Unani Medicine, Hamdard University Bangladesh, Bangladesh

^{4,5} Department of Public Health, ASA University Bangladesh, Bangladesh

Abstract

Rheumatic disorders are single most common cause of physical disability in the elderly and around one third of all people with physical disability have rheumatologic etiological disorder as the primary cause. So there is also a great socio economic impact of musculoskeletal disorders on the society. In the development world, it comes in the form of huge numbers of lost working days, vast amount of compensatory disability allowance cost of drugs and massive reduction of the workout owing to increased mortality and morbidity. This is retrospective observational study. In this study two hundred ninety seven patient's information were collected from June, 2010 to May, 2011 from OPD of Govt. Unani & Ayurvedic medical college hospital records. Data collection period for this study was June, 2011 to September, 2011. The significant finding of the study was from 11 to 80 years aged patients who came to the hospital. Average age of the patients was 44 years and SD was ± 13.14 . Age between 31 to 50 years people was mostly affected by musculoskeletal disorder. About 87% of them were married and maximum 37.7% had secondary level education. Non-government job holder and housewife were maximum occupation. Among 297 patients, 40% patient's monthly income level was between tk. 6000 to 10000. In this study, 67% of the respondent deals with single family and maximum 46% were ill health. Among 297 patients, there are 74 patient's had come with compliance of affected joints are hot, redness & swelling around joint margins, 45 patients had come with morning stiffness in the joint, 47 patients had come with the compliance of rheumatoid nodules, 31 patient's had come with great toes are affected, 33 patients had come with fever, 87 had come with swelling around joint margin, maximum 164 patients had come with muscle weakness of the patient, 46 patients had come with muscle wasting of the patient and 221 patients had come with the compliance pain occur laboring, heavy lifting, bending, twisting, driving or pain worse on movement. Among the patients, low back pain and osteoarthritis is the leading problem and 86% patients RA test result negative. Middle aged people who are economically not sound are suffering than others. Early diagnosis and treatment is very essential for the patient so that they can lead a normal life. So raising awareness and dissemination of knowledge about rheumatic diseases among the patients can ensure early diagnosis which would help life for the patients.

Keywords: rheumatic diseases, Unani & ayurvedic hospital

Introduction

Rheumatology includes a large variety of diseases, not only inflammatory rheumatic and systemic diseases but also degenerative joint and spine diseases, soft tissue rheumatism and metabolic bone diseases [1]. The rheumatism is a common name for many pains and aches, which have yet no peculiar appellation, though owing to very different causes [2]. Rheumatic diseases are a common cause of disability and a large public health burden [3]. In the United Kingdom, up to 1 in 4 new consultations in general practice is for musculoskeletal symptoms [4]. Most musculoskeletal conditions predominate in women and show a strong association with ageing [5]. Rheumatological disorders are the single most common cause of physical disability in the elderly and around one third of all people with physical disability have rheumatological etiological disorder as the primary cause [6]. The rheumatological diseases remain a clinically challenging but satisfying group of disorders for internists to manage [7]. The advent of modern laboratory and imaging

techniques has greatly increased the incidence of diseases but clinical diagnosis based on criteria specific to each rheumatological disorder still remains the sine qua non [8]. The prevalence of rheumatological disorders vary considerably depending on environmental factors, ethnicity and even over times within the same geographic area among the same ethnic origins [9-11]. In the United States, the incidence of rheumatoid arthritis (RA) progressively declined since early 1960s, while the prevalence of gout doubled from 1969 to 1985 and it further increased by 80% from 1990 to 1999. In a COPCORD (Community Oriented Program for Control of Rheumatic Disorders) study it was seen that rheumatic disorders were common causes of morbidity, disability and work loss in Bangladeshi rural and urban communities [12]. This current study describes the spectrum of rheumatological disorders encountered in the newly established rheumatology clinic of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), started from July 2009 and run by a team comprising

Internists and Rheumatologists, Physical Medicine Specialist and Orthopedic Surgeons. Anton van Leeuwenhoek described the microscopic appearance of uric acid crystals in 1679. The word gout was initially used by Randolphus of Bocking, around 1200 AD. It is derived from the Latin word gutta, meaning "a drop" of liquid [13]. Gout has, however, been known since antiquity. Historically, it has been referred to as "the king of diseases and the disease of kings" or "rich man's disease". The first documentation of the disease is from Egypt in 2,600 BC in a description of arthritis of the big toe. The Greek physician Hippocrates around 400 BC commented on it in his Aphorisms, noting its absence in eunuchs and premenopausal women. Gout is a metabolic disorder characterized by excessive concentration of uric acid in the blood occasioning the deposition of sodium urate in the joints particularly the extremities and notoriously the great toe [14]. It is also known as podagra when it involves the big toe is a medical condition usually characterized by recurrent attacks of acute inflammatory arthritis a red, tender, hot, swollen joint. The metatarsal-phalangeal joint at the base of the big toe is the most commonly affected (50% of cases). However, it may also present as tophi, kidney stones or urate nephropathy. It is caused by elevated levels of uric acid in the blood which crystallizes and is deposited in joints, tendons and surrounding tissues [15]. Gout affects around 1–2% of the Western population at some point in their lifetimes, and is becoming more common. Rates of gout have approximately doubled between 1990 and 2010. This rise is believed to be due to increasing life expectancy, changes in diet and an increase in diseases associated with gout, such as metabolic syndrome and high blood pressure [16].

A number of factors have been found to influence rates of gout, including age, race and the season of the year. In men over the age of 30 and women over the age of 50, prevalence is 2% [17]. In the United States, gout is twice as likely in African American males as it is in European Americans. Rates are high among the peoples of the Pacific Islands and the Maori of New Zealand, but rare in Australian aborigines, despite a higher mean concentration of serum uric acid in the latter group [18]. It has become common in China, Polynesia and urban sub-Saharan Africa. Some studies have found attacks of gout occur more frequently in the spring. This has been attributed to seasonal changes. Gout can present in a

number of ways, although the most usual is a recurrent attack of acute inflammatory arthritis such as a red, tender, hot, swollen joint [19]. The metatarsal-phalangeal joint at the base of the big toe is affected most often, accounting for half of cases. Other joints, such as the heels, knees, wrists and fingers, may also be affected. Joint pain usually begins over 2–4 hours and during the night. The reason for onset at night is due to the lower body temperature then [20].

Methodology

This is retrospective observational study. In this study two hundred ninety seven patients information were collected from June, 2010 to May, 2011 from OPD of Govt. Unani & Ayurvedic medical college hospital records. Data collection period for this study was June, 2011 to September, 2011. The following formula has been used to calculate the sample size. Sample size, Where, $n = \text{Desired sample size} = Z^2pq/d^2$ Therefore, 422 was the study population in my study but due to the limitation of the study period a total of 297 the patient (11-80) aged was diagnosed as rheumatic diseases patients were interviewed for conducting the study. Inclusion criteria were the patient who diagnosed as rheumatic patient of this Hospital and those who were give verbal consent and participate in interview. Sampling technique was purposive. Data collection tools was a semi structured type of questionnaire according to the objectives and variables of the study and which was developed and pre-tested before interview. The analysis plan of the study includes description of the study population by their socio-demographic characteristic first. The descriptive statistic was used like Mean, Median, Mode, and percentages. In order to find out the association between the dependent and the independent variables, chi-square test was performed to find out the bivariate relationship and the level of significance. For better view of the study population, some graphs and charts had used. As the researcher had analyzing the data, there were least possibility of quality deviation and bias. The researcher was stay in the hospital regularly during work hours and was responsible for providing workload and examining work performance. The researcher has monitor and supervised the process throughout the study. To ensure the quality of the data, specific measures were taken before, during and at the end of the data collection period.

Results

Table 1: Distribution of the respondents according to present symptoms

Symptoms	Present		Absent	
	Number	Percentage	Number	Percentage
Affected joints are heat, redness & swelling around joint margins	74	24.9	223	75.1
Morning stiffness in the joint	45	15.2	252	84.8
Rheumatoid nodules	47	15.8	250	84.2
Great toes are affected	31	10.4	266	89.6
Fever is very acute attack	33	11.1	264	88.9
Swelling around joint margin	87	29.3	210	70.7
Muscle weakness of the patient	164	55.2	133	44.8
Muscle wasting of the patient	46	15.5	251	84.5
Pain occur laboring, heavy lifting, bending, twisting, driving or pain worse on movement	221	74.4	76	25.6

Among 297 patients, there are 74 patient's had come with compliance of affected joints are hot, redness & swelling around joint margins, 45 patients had come with Morning stiffness in the joint, 47 patients had come with the compliance of Rheumatoid nodules, 31patient's had come with Great toes are affected, 33 had come with Fever is very acute attack, 87 had come with Swelling around joint margin, maximum 164 patients had come with Muscle weakness of the patient, 46 patients had come with Muscle wasting of the patient and 221 patient's had come with the compliance Pain occur laboring, heavy lifting, bending, twisting, driving or pain worse on movement.

Table 2: Distribution of the respondents according to chief complains when comes first

Chief complains	Frequency	Percentage
Neck pain	31	10.4
Back pain	105	35.4
Knee pain	68	22.9
Multiple joint pain	93	31.3
Total	297	100

In this study, about 10% respondents had come with complains of neck pain, about 35% had come with complains of back pain, about 23% had come with complains of knee pain and rest of the respondents (31%) had come with complains of multiple joint pain.

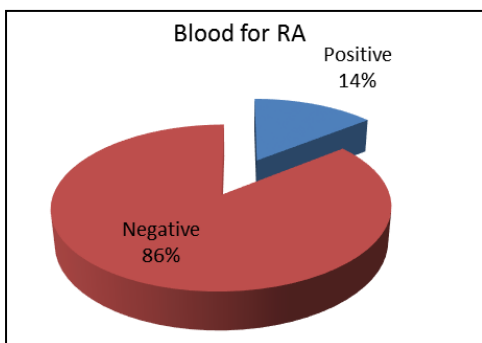


Fig 1: Distribution of the respondents according to result of RA test

Among 297 respondents, it is clearly state that 86% of them had got found their RA test result as negative and rest of the respondents (14%) were positive in their blood for RA test.

Table 3: Distribution of the respondents according to result of pathological findings

Pathological findings	Normal		Abnormal	
	Number	Percentage	Number	Percentage
Blood for CBC	22	7.4	275	92.6
Blood for CRP	40	13.5	257	86.5
Uric acid level	250	84.2	47	15.8
Radiographs/ MRI	189	63.6	108	36.4

In this study, this above table state that among 297 respondents, 7.4% were normal and 92.6% were abnormal result in their blood test for CBC. 13.5% were normal and 86.5% respondents have got abnormal result in the test of blood for CRP, In the other hand, 84.2% were normal result

and only 15.8% have got abnormal result in uric acid level and 63.6% respondents result were normal and 36.4% respondents result were abnormal in radiographs or MRI.

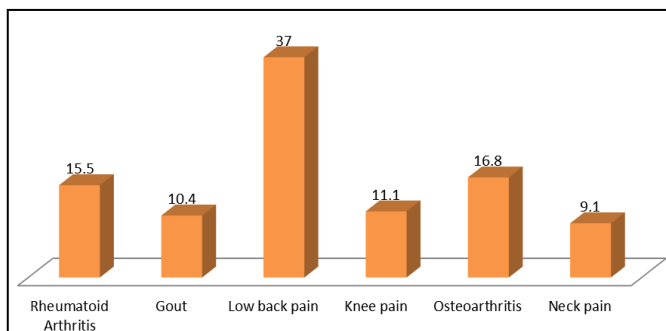


Fig 2: Distribution of the respondents according to diagnosis of diseases

Among the patients, 15.5% were diagnosed as a rheumatoid arthritis patient, 10.4% were gout, 37% had only low back pain, 11.1% had only knee pain, 16.8% were diagnosed as a osteoarthritis and 9.1% had neck pain.

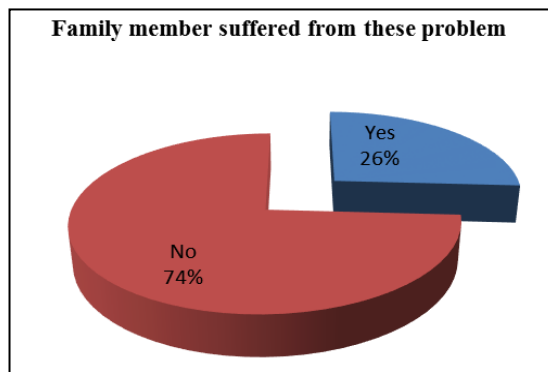


Fig 3: Distribution of the respondents according to family history of these diseases

Below figure state that about 74% of the patient had no family history of rheumatoid arthritis and rest of the patient about 26% had family history of rheumatoid arthritis.

Table 4: Distribution of the respondents according to age

Age	Frequency	Percentage	SD and Mean
11-20	1	0.3	
21-30	55	18.51	
31-40	81	27.27	SD= ± 13.14 Mean Age= 44.03 Years
41-50	81	27.27	
51-60	43	14.47	
61-70	26	8.75	
71-80	10	3.36	
Total	297	100	

Among 297 patient, only 19% patient were under the age of 30 years, 27% were between the age of 31-40 years, on the other hand same percentage patient were between 41-50 years, about 14% were belongs to 51-60 years and more than 12% were 60 years above in age. Here, average age of the patient was 44 years and standard deviation were ± 13.14.

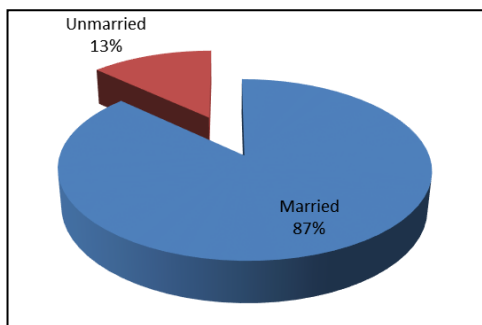


Fig 4: Distribution of the respondents according to marital status

In this study, it is clear that 87% of the respondents were married and 13% were unmarried.

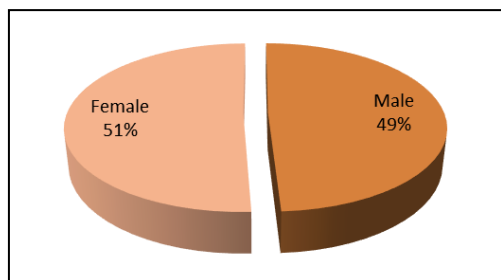


Fig 5: Distribution of the respondents according to gender

Among two hundred ninety seven patients, 51% were female and 49% of the respondents were male.

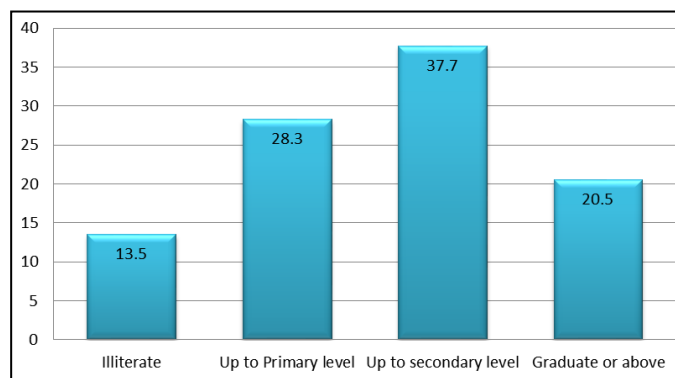


Fig 6: Distribution of the respondents according to educational qualification

This below figure, it is clear that 13.5% of the respondents were illiterate, 28.3% respondents had up to primary level education, maximum 37.7% had secondary level education and rest of 20.5% were graduate or above education.

Table 5: Distribution of the respondents according to occupation

Occupation	Frequency	Percentage
Housewife	75	25.3
Day labor/Rickshaw puller	43	14.5
Business	35	11.8
Govt. job	21	7.1
NGO job	99	29.4
Others	24	7.1
Total	297	100

This below table state that 25.3% of the respondents were housewife, 14.5% of the respondents were day labor or rickshaw puller, 11.8% of the respondents were businessman, 7.1% of the respondents were government job holder and same percentage were others occupation. Maximum 29.4% of the respondents were NGO job holder.

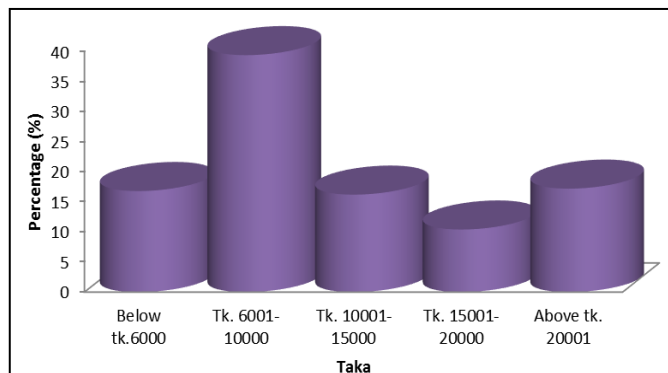


Fig 7: Distribution of the respondents according to family monthly income

In this study population, 18% of the respondent’s income level was tk.6000, maximum 40% % of the respondents had between tk. 6001-10000. 16% of the respondent’s monthly income was between tk. 10001-15000. 12% of the respondent’s monthly income was between tk. 15001-20000 and rest of the respondent’s monthly income was more than tk.2000.

Table 6: Distribution of the respondents according to housing system

Housing system	Frequency	Percentage
Paka/Building	76	25.6
Semi paka	97	32.7
Tin shed	77	25.9
Slum house	47	15.8
Total	297	100

Among the respondents, about 26% respondents housing system was paka or building, about 33% respondents housing system was semi paka, about 26% respondents housing system was tin shed and rest of the respondents housing system was in slum.

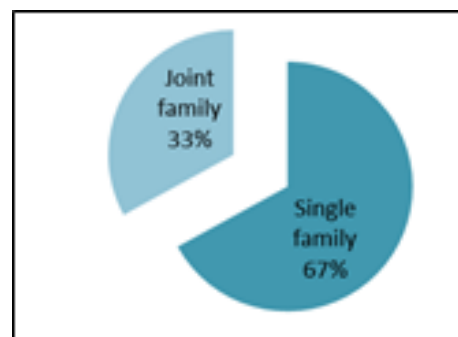


Fig 8: Distribution of the respondents according to type of family

In this study, 67% of the respondent deals with single family and 33% of them live in joint family.

Table 7: Distribution of the respondents according to chronic diseases in family

Chronic diseases in family	Frequency	Percentage
Yes	149	50.2
No	148	49.8
Total	297	100

This above table shows that about 50% respondents had chronic disease in their family and about 50% had no chronic disease in their family.

Table 8: Distribution of the respondents according to physical appearance

Physical appearance	Frequency	Percentage
Ill	137	46.1
Obese	123	41.4
Normal	37	12.5
Total	297	100

Among 297 respondents, 46% were ill health, 41% were obese and only 12.5% were normal health patient.

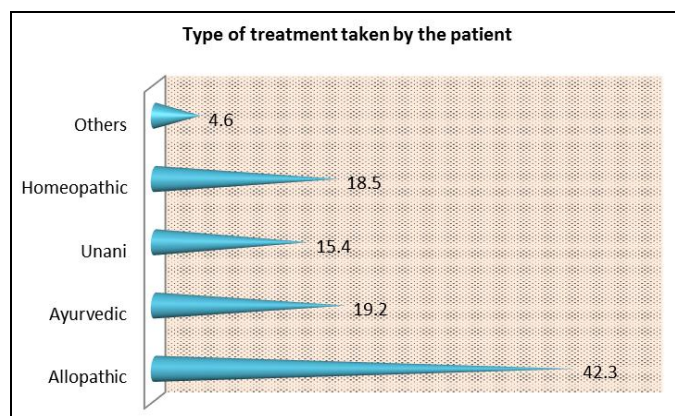


Fig 9: Distribution of the respondents according to treatment taken

About 42.3% of the respondents had told that they had took allopathic medicine as treatment, 19.2% of the respondents had told that they had took Ayurvedic medicine as treatment, 15.4% of the respondents had told that they had took Unani medicine as treatment, 18.5% of the respondents had told that they had took homeopathic medicine as treatment and 4.65% had took others medicine.

Table 9: Distribution of the respondents according to availability of Ayurveda medicine

Availability of Ayurvedic medicine of the patient at the locality	Frequency	Percentage
Yes	227	76.4
No	70	23.6
Total	297	100

Among 297 patients, 76.4% patient had told that Ayurvedic medicine is available at their locality and 23.6% had told that Ayurvedic medicine is not available at their locality.

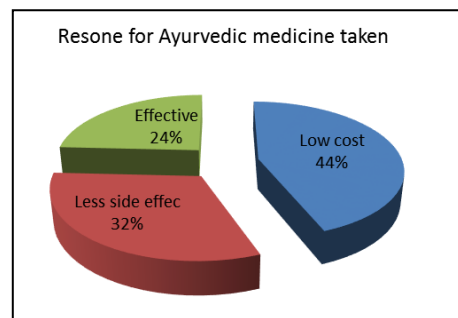


Fig 10: Distribution of the respondents according to choice of medicine

This figure shows that 32% of the patient has chosen Ayurvedic medicine because of less side effect, 44% of the patient has chosen Ayurvedic medicine because of low cost and 24% of the patient has chosen Ayurvedic medicine because of its affectivity.

Table 10: Distribution of the respondents according to reason of coming to this hospital

Reason of coming	Number	Percentage
Relative's/Friend's request	116	39.1
Media information	124	41.7
Others sources	57	19.2
Total	297	100

Among 297 respondents, 39% of them had come to this hospital by their relatives or friend's request, about 42% of them had come informed by the media and only 19% had come according to others sources.

Discussion

This study was conducted to know the pattern of rheumatic diseases and socio- economic conditions of the patients attending at OPD of Govt. Unani & Ayurvedic Medical college hospital Mirpur, Dhaka. Rheumatic disorders are neglected health problems in Bangladesh and probably no control program has been introduced so far mainly because of lack of necessary information. Communicable diseases were once the main causes of morbidity and mortality but due to the adoption of various public health measures, both at government and non-government levels, the morbidity due to these diseases are now reduced to a great extent. To conduct this study, there are 297 patients' hospital record were collected from that hospital OPD. The patient had come to this hospital from June 10, to May 11 at the age of 11 years to 80 years patient's history had taken. Both of male and female patients were available. The major findings were like: Among 297 patient, only 19% patient were under the age of 30 years, 27% were between the age of 31-40 years, on the other hand same percentage patient were between 41-50 years, about 14% were belongs to 51-60 years and more than 12% were 60 years above in age. Here, average age of the patient was 44 years and standard deviation were ± 13.14. Among the patients, 51% were female and 49% of the respondents were male. For the education 13.5% of the respondents were illiterate, 28.3% respondents had up to primary level education, maximum 37.7% had secondary level education

and rest of 20.5% were graduate or above education.

Prevalence estimates of MSK pain in rural communities have varied from 16.5% in Northern Pakistan ^[21] to 36.2% in Thailand ^[22]. Prevalence estimates in 3 clusters, rural (26.2%), urban slum (24.9%), and urban affluent (27.9%), was nearly similar. In both different age groups and different communities, women suffered more frequently than their male counterparts. The estimates increased with age. Similar findings have also been observed in population studies in England ^[21] and India ^[8].

The occupation of the patients was like 25.3% of the respondents were housewife, 14.5% of the respondents were day labor or rickshaw puller, 11.8% of the respondents were businessman, 7.1% of the respondents were government job holder and same percentage were others occupation. Maximum 29.4% of the respondents were NGO job holder.

Maximum patient's monthly income was low level. 40% patient's income level had between tk. 6001 to 10000. Here it was found that 50% respondents had chronic disease in their family and about 50% had no chronic disease in their family.

Among 297 patients, there are 74 patient's had come with the compliance affected joints are hot, redness & swelling around joint margins, 45 patients had come with Morning stiffness in the joint, 47 patients had come with the compliance of Rheumatoid nodules, 31 patient's had come with Great toes are affected, 33 had come with Fever is very acute attack, 87 had come with Swelling around joint margin, maximum 164 patients had come with Muscle weakness of the patient, 46 patients had come with Muscle wasting of the patient and 221 patient's had come with the compliance Pain occur laboring, heavy lifting, bending, twisting, driving or pain worse on movement.

In this study, about 10% respondents had come with the complains of neck pain, about 35% had come with the complains of back pain, about 23% had come with the complains of knee pain and rest of the respondents (31%) had come with the complains of multiple joint pain.

On the other hand, 86% of them had got found their RA test result as negative and rest of the respondents (14%) were positive in their blood for RA test.

After diagnosis, 15.5% were diagnosed as a rheumatoid arthritis patient, 10.4% were gout, 37% had only low back pain, 11.1% had only knee pain, 16.8% were diagnosed as a osteoarthritis and 9.1% had neck pain.

Conclusions

Modern trends in the prevalence and effects of rheumatic conditions must be considered in relation to increasing life expectancy population problems, such as rapid growth of urban populations, new occupational stress, lifestyle changes and a number of other factors. Rheumatic disorder are common causes morbidity, disability, and work loss in rural and urban communities of Bangladesh and rheumatic diseases is major public health problem in our country although this is not properly emphasized and it is the commonest problem among surrounding people of this hospital area. Most of the people come to the hospital with symptom of pain. It is found that commonly elder people are sufferer and they are economically not sound. Female are suffering more than male. This study state that ill healthy & obese people affected by

any kind of pain. Early diagnosis and treatment is very essential for the patient so that they can lead a normal or near normal life. It can say that rheumatic disorders are neglected health problems in Bangladesh and probably no control program has been introduced so far mainly because of lack of necessary information.

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