

**Spectrum of rheumatological disorders  
among patients attending with  
musculoskeletal symptoms: experience  
from medicine outpatient department of a  
tertiary care hospital of Bangladesh**

**Dr. Md. Tariful Hoque  
Senior Medical officer  
Department of  
Internal Medicine  
BIRDEM General Hospital**

# Introduction

- Musculoskeletal (MSK) conditions are prevalent and their impact is pervasive. They are the most common cause of severe long term pain and affect hundreds of millions of people around the world
- They significantly affect the psychosocial status of affected people as well as their families and carers

Woolf AD, Akesson K. Understanding the burden of musculoskeletal conditions. The burden is huge and not reflected in national health priorities. *BMJ* 2001;322:1079-80.

- MSK disorders are the second most common cause of disability worldwide.
- Predominate in women and show strong association with ageing.

Vos T, Flaxman AD, Naghavi M, et al. *Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990 2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet 2012;380:2163–96.*

# Bangladesh Perspective

- The prevalence of musculoskeletal pain was 26.3%
- The prevalence of definite rheumatic disorders was 24.0%
- Common rheumatic disorders were osteoarthritis of the knees (7.5-10.6%), nonspecific low back pain (6.6-9.9%), lumbar spondylosis (2-5%), fibromyalgia (3.3-4.4%), and soft tissue rheumatism (2.5-3.3%)

Haq SA, Darmawan J, Islam MN, et al. Prevalence of rheumatic diseases and associated outcomes in rural and urban communities in Bangladesh: a COPCORD study. *J Rheumatol* 2005 Feb;32 (2):348-53.

# Bangladesh Perspective

- The prevalence of functional disability was 23.3-25.5%
- Among the positive respondents, reported loss of work for durations of 29 - 103 days within the previous year

Haq SA, Darmawan J, Islam MN, et al. Prevalence of rheumatic diseases and associated outcomes in rural and urban communities in Bangladesh: a COPCORD study. J Rheumatol 2005 Feb;32 (2):348-53.

# **Aims & Objectives**

- To describe the pattern of rheumatological disorders in patients attending the medicine outpatient department of BIRDEM General Hospital

# Methods

- Type of study: retrospective study
- Place of study: Medicine outpatient department (OPD) of BIRDEM General Hospital
- Period of study: From January, 2015 to June 2017

# Methods

- Inclusion criteria: All the patients attending at the medicine OPD were consecutively and purposively included in the study
- Exclusion criteria: Patients having incomplete data and non-rheumatological diagnoses



- Diagnosis of rheumatological diseases were made on the basis of American College of Rheumatology (ACR) and European League Against Rheumatism (EULAR) Classification Criteria and laboratory investigations
- All the necessary data were recorded in preformed data sheets for the study

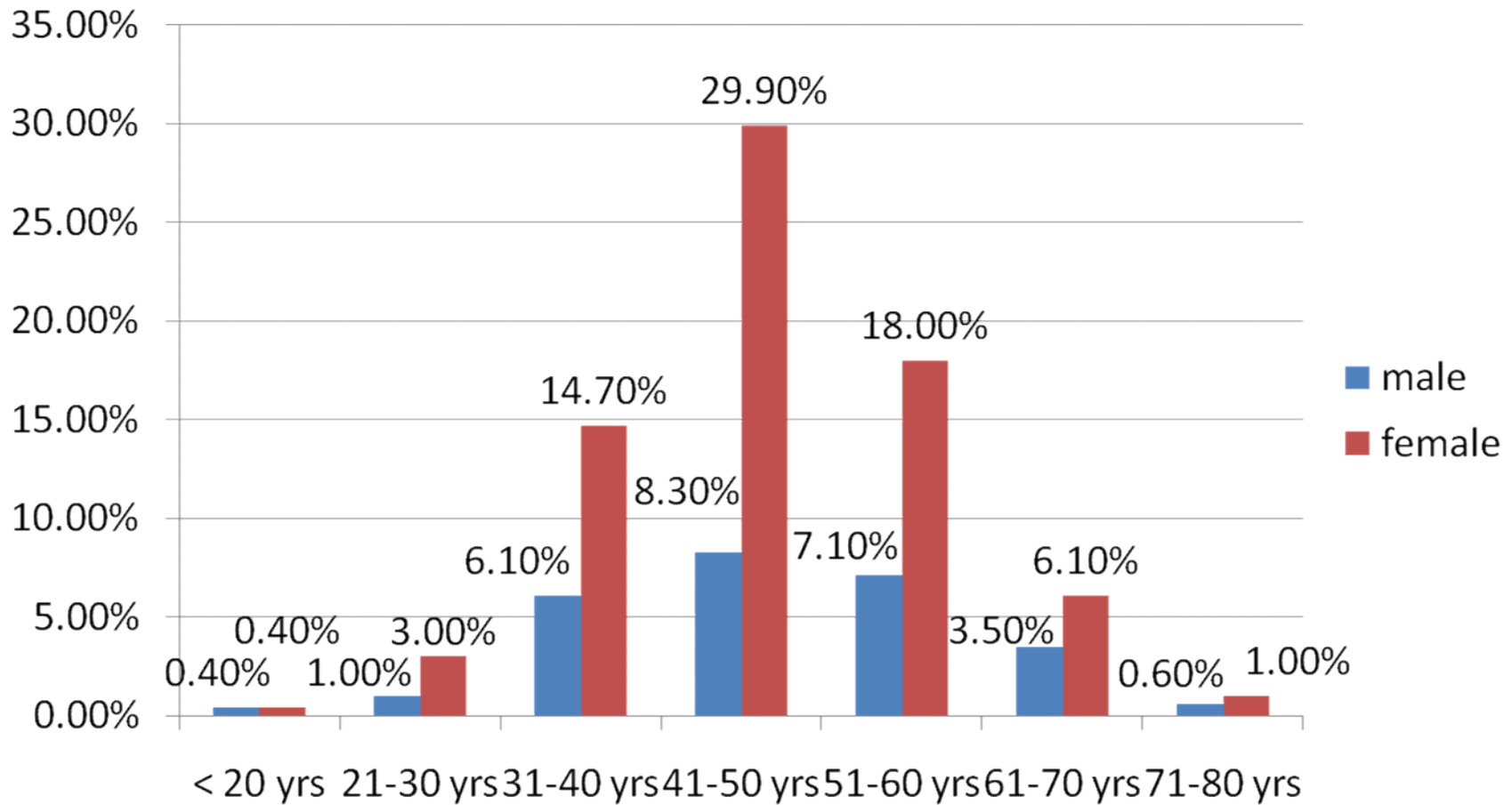
# Results

- Total 495, female 353 (71.31%), male 142 (28.68%)

Female: Male ratio 2.5:1

- Mean age: 48.6 years (Range 18-76 years)

# Age and Sex Distribution



# Disease Spectrum

Diagnoses	Number of patients	Percent of all Patients	Sex distribution (F:M)
Inflammatory joint and spine diseases	345	69.69	2:1
Degenerative joint and spine diseases	109	22.02	1.8:1
Connective tissue diseases	11	2.22	10:1
Soft tissue rheumatism	18	3.64	8:1
Metabolic bone diseases	12	2.43	3:1

# Inflammatory joint and spine diseases (n=345, female 230, male115)

Diagnosis	Number	Percent	Female	Male
Rheumatoid arthritis (RA)	263	76.23	219 (83.26%)	44 (16.73%)
Ankylosing spondylitis (AS)	46	13.33	16 (34.78%)	30 (65.21%)
Psoriatic arthritis	15	4.35	7 (46.66%)	8 (53.33%)
Gout	12	3.48	3 (25%)	9 (75%)
Reactive Arthritis	9	2.6	4 (44.44%)	5 (55.55%)

# Degenerative joint and spine diseases

## (n=109, female 70, male 39)

Diagnosis	Number	Percent	Female	Male
Osteoarthritis (knee)	40	36.69	29 (72.5%)	11 (27.5%)
Lumbar spondylosis	32	29.35	22 (68.75%)	10 (31.25%)
Cervical spondylosis	22	20.18	10 (45.45%)	12 (54.55%)
Osteoarthritis (hip)	15	13.76	9 (60%)	6 (40%)

# Connective tissue disease (n=11)

Diagnosis	Number	Percent	Female	Male
Systemic lupus erythematosus (SLE)	5	45.5	5 (100%)	0 (0%)
Poly/dermato-myositis	2	18.2	1 (50%)	1(50%)
Systemic sclerosis (SS)	2	18.2	2 (100%)	0 (0%)
Mixed connective tissue disease (MCTD)	2	18.2	2 (100%)	0 (0%)

## Soft tissue rheumatism (n=18)

- Fibromyalgia (FM)-18 (100%)

Female 17 (94.44%)

Male 1 (5.55%)



# Metabolic Bone Disease (n=12)

- Osteoporosis-12 (100%)

Female 10 (83.33%)

Male 2 (16.66%)

# Auto-immune Markers

Disease	Marker	Positive	Percent
RA	Rheumtoid factor	180	68.44
	Anti-CCP Ab	104	39.5
AS	HLA-B27	2	4.3
SLE	ANA	5	100
	Anti-dS DNA	5	100
PSS	Anti-scl 70	2	100
MCTD	Anti-RNP	2	100

# Co-morbidities

Diagnosis	Frequency	Percent
DM	205	41.4
IHD	102	20.6
HTN	95	19.1
CKD	45	9
Hypothyroidism	20	4

# Discussion

- The prevalence of rheumatological disorders in developing countries is largely unknown
- In the current study, we have tried to describe the frequency of different rheumatological diseases in Bangladeshi population

# Comparison

Disease type	Current study	Previous study
Inflammatory joint and spine diseases	69.69%	33.5%
Degenerative joint and spine diseases	22.02%	49.9%
Connective tissue diseases	2.22%	2.5%
Soft tissue rheumatism	3.64%	7.0%
Metabolic bone diseases	2.43%	4.8% * AhmedAKM, Rahim MA, Dewan P et al. Spectrum of Rheumatological Disorders: A Clinic-based Study.J MEDICINE 2014; 15 : 23-27

# Comparison

Disease type	Current study	Nepal*	Belgium**
Inflammatory joint and spine diseases	69.69%	21.0%	36%
Degenerative joint and spine diseases	22.02%	21.4%	37%
Connective tissue diseases	2.22%	4.7%	5%
Soft tissue rheumatism	3.64%	40%	37%
Metabolic bone diseases	2.43%	3.9%	17%
		*Das RN, Paudel R. Spectrum of rheumatological disorders: an experience of 337 cases in a tertiary care hospital in Pokhara valley, Nepal. APLAR Journal of Rheumatology 2006;9:248-56.	**Vanhook J, Decerck K, Geusens P. Prevalence of rheumatic diseases in a rheumatological outpatient practice. Ann Rheum Dis 2002;61:453-55.

# Discussion

- RA was the commonest inflammatory arthritis in our study
- AS was in younger male patients
- Gout occurred in 2.4% cases and most of them had CKD as risk factor

Zeng QY, Chen R, Darmawan J, et al. Rheumatic diseases in China. *Arthritis Research & Therapy* 2008;10: 1186-89. Peters D, Davies P, Pietroni P. Musculoskeletal clinic in general practice: study of one year's referrals. *Br J Gen Pract* 1994 Jan;44(378):25-29.

# Discussion

- Soft tissue rheumatism was less common in our study
- FM was diagnosed as one of the main disease under the heading of soft tissue rheumatism
- SLE was the commonest connective tissue disease



# Discussion

- Osteoporosis was present in 2.43% of total cases, which is far lower than other studies
- One possible explanation for this reason might be that, being specialized endocrine hospital, many osteoporosis cases are managed by endocrinologists

# Limitations

- Did not represent the true prevalence among Bangladeshi population (as in COPCORD studies) as it was a clinic based single centre study
- Most patients were diabetic, whether rheumatological disorders are similarly distributed among non-diabetic populations were not also clear

# Conclusion and recommendation

- RA is the most common inflammatory condition
- Degenerative diseases are the second most common condition
- Require life-long follow up for proper disease control and to avoid drug related adverse effects
- Larger and multi-center survey is required

***Thank You All***