

Original Article

Diseases Pattern in The Department of Physical Medicine & Rehabilitation in A Tertiary Care Hospital

Mandal MA¹, Moniruzzaman M², Mahmood K³, Islam MJ⁴, Uddin KS⁵

Abstract

Background: The field of Physical Medicine and Rehabilitation focuses on the restoration of health and function and reintegration of the patient into the community, Providing services (outdoor & indoor patients) of physical medicine & rehabilitation (PMR) department was started in 2015. Since establishment, department of Physical Medicine is providing services as outdoor basis regularly. **Aim & Objectives:** The purpose of the study was to observe the disease pattern and demographic characteristics of patients attending the department of Physical Medicine and Rehabilitation in a tertiary care hospital. **Methods:** This is a retrospective study carried out at the department of Physical Medicine and Rehabilitation in Khwaja Yunus Ali Medical College Hospital (KYAMCH), Sirajganj for the period of one year from 1st January, 2016 to 31st December, 2016. **Results:** Total eighteen hundred sixty five (n = 1865) patients were studied, of which 46.21% were male and 53.78% were female. The mean age was 34.64 ± 5.36 years; maximum patients (25.14%) belong to 31-40 years of age. Maximum patients (78%) were come from out of Sirajgonj District specially North Bengal. Regarding disease pattern, 21.60% were PLID, 10.99% stroke, cervical spondylosis 11.15%, lumbar spondylosis 11.52%, frozen shoulder 10.83%, low back pain 9.49%, osteoarthritis 8.25%, facial palsy 0.43% rheumatoid arthritis 5.47%, seronegetavive Spondyloarthopathy 0.26%, GBS 0.10% acute neck sprain/strain 5.68% and others 4.18%. **Conclusion:** A large scale multi-centered study should be performed in the country. A uniform data system should be constructed for Medical rehabilitation in Bangladesh. Maximum patients were having PLID, Cervical spondylosis, lumbar spondylosis, Stroke & Frozen shoulder.

Key words: Diseases pattern, Physical medicine, Tertiary hospital.

Date of received: 03.03.2017

Date of acceptance: 05.05.2017

Introduction

Unlike some medical specialties, rehabilitation medicine is not limited to a single organ system. Attention to the whole person is rehabilitation absolute. The goal of the rehabilitation physician is to restore handicapped people to the fullest possible physical, mental, social, and economic independence. Consequently, the person must be evaluated in relation not only to the disease but also to the way the disease affects and is affected by the person's family and social environment, vocational

responsibilities, economic state, interests, hopes and dreams¹. The field of Physical Medicine and Rehabilitation focuses on the restoration of health and function and reintegration of the patient into the community^{2,3}. Khwaja Yunus Ali Medical College Hospital was established in 2003. Physiotherapy & Rehabilitation centre was established in 2006 under supervising of physiotherapist. Providing services (outdoor & indoor patients) of physical medicine &

1. Dr. Muhammad Alamgir Mandal, Assistant Professor, Dept. of Physical Medicine & Rehabilitation, KYAMCH, Enayetpur, Sirajgonj.
2. Dr. Mohammad Moniruzzaman, Assistant Professor, Dept. of Physical Medicine & Rehabilitation, DMCH, Dhaka.
3. Dr. Khurshid Mahmood, Associate Professor, Dept. of Physical Medicine & Rehabilitation, NINS, Dhaka.
4. Dr. Md. Jahidul Islam, Associate Professor, Dept. of Physical Medicine & Rehabilitation, DMCH, Dhaka.
5. Dr. Kazi Shihab Uddin, Assistant Professor, Department of Medicine, KYAMCH, Enayetpur, Sirajgonj.

Correspondence: Dr. Muhammad Alamgir Mandal, Assistant Professor, Department of Physical Medicine & Rehabilitation, KYAMCH, Enayetpur, Sirajgonj.

rehabilitation (PMR). Since establishment, department of Physical Medicine is providing services as outdoor basis regularly. In the year 2015, the indoor service has been established. There are 10 beds (05 male & 05 female beds) in PMR department for indoor patients. Physical Medicine & Rehabilitation Department, KYAMCH provides services to the patients with musculoskeletal disorders and neurological problems from the beginning. This department tries to correlate with other departments in providing facilities, faith and satisfaction to the patients due to road traffic accidents, spinal cord injury, stroke, CABG, musculoskeletal condition like arthritis, low back pain, neck pain, ICU & burn rehabilitation etc. This study was carried out with the intention to provide information about demographic data & disease pattern among the patients receiving treatment like NSAIDs, PPI, Muscle relaxant, physiotherapy such as Cervical traction, Lumbar traction, UST, MWD, SWD, TENS, IFT, Waxbath and Exercise in the outpatient department of physical medicine & rehabilitation, KYAMCH, Sirajgonj.

Material & Methods

This is a retrospective review of the records at Physical Medicine and Rehabilitation of Khwaja Yunus Ali Medical College Hospital over a period of one year from January 2016 to December 2016. The subjects were enrolled on an individual basis by a given patient during the period of study. Data was analyzed using microsoft excel and statistical package for social software (SPSS). Means and standard deviation were used for continuous variables, and simple proportions were used for categorical data.

Results

Total number of patients was 1865. Among them 862 (46.21%) were male and 1003 (53.79%) were female. (Figure -1)

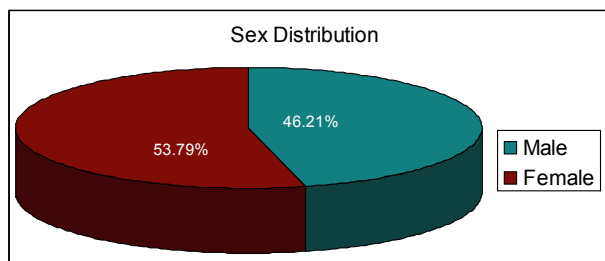


Figure-1: Sex distribution of the patients

6.48% of patients were under 20 years of age, about 79.10% of patients belong to 2nd, 3rd, 4th, 5th decades.

14.42% were above 60 years of age (Figure -2).

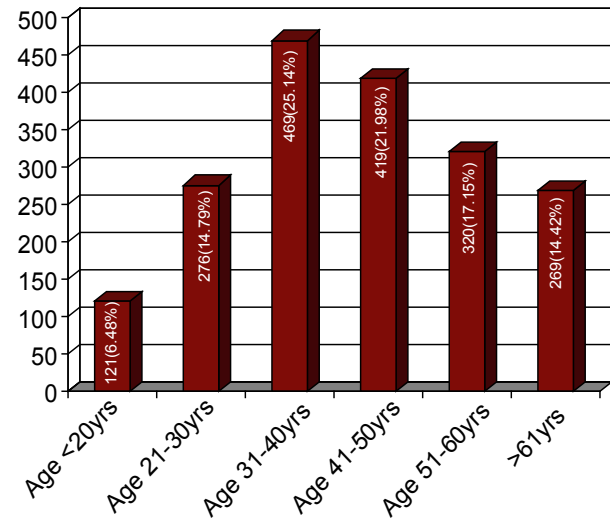


Figure-2: Age distribution of the patients

Maximum of the patients (78%) were from outside of Sirajgonj District. Rests of the patient were within Sirajgonj District. (Figure -3)

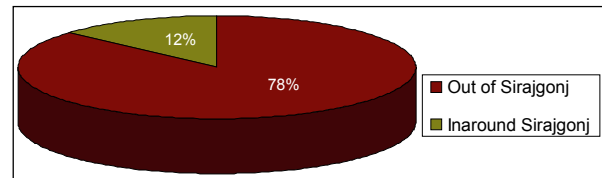


Figure-3: Catchment area of the patients

Among the total number of patients (1865), majority were housewives (38%) followed by Farmer (32%), Service holder (7%), Businessman (5%) and Student (3%), Teacher (7%) and others (8%) of the patients. (Figure -4)

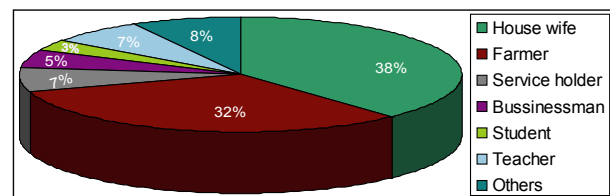


Figure-4: Catchment area of the patients

Regarding disease pattern, 21.60% were PLID, 10.99% stroke, cervical spondylosis 11.15%, lumbar spondylosis 11.52%, frozen shoulder 10.83%, low back pain 9.49%,

osteoarthritis 8.25%, facial palsy 0.43% rheumatoid arthritis 5.47%, seronegative Spondyloarthopathy 0.26%, GBS 0.10% acute neck sprain/strain 5.68% and others 4.18%. Attending outpatient department of Physical Medicine and Rehabilitation, KYAMCH, Sirajganj. (Figure -5 & Table-I) PLID was revealed in MRI as bulging, protrusion or extension of disc causing indentation of thecal sac, neural foraminal narrowing and or compression of existing nerve root. Considerable improvement after physiotherapy.

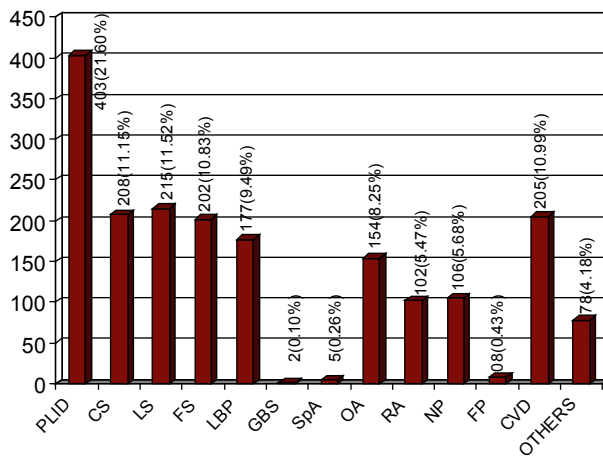
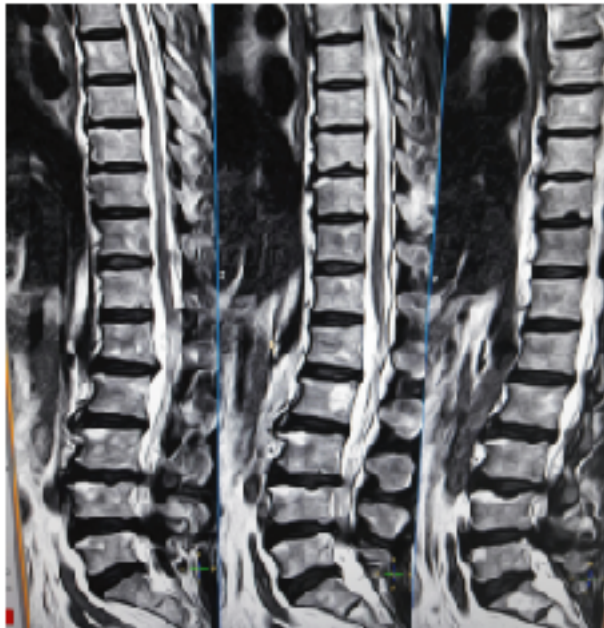


Figure-5: Disease profile of the patients

Table-I: Disease profile of the patients

S/N	Disease	Total	%
1	PLID	403	21.60
2.	Lumbar spondylosis	215	11.52
3.	Cervicals podylosis	208	11.15
4.	CVD	205	10.99
5.	Frozen shoulder	202	10.82
6.	Low back pain	177	9.49
7.	Osteoarthritis	154	8.25
8.	Rheumatoid arthritis	102	5.47
9.	Neck pain	106	5.68
10.	Facial palsy	08	0.43
11 .	GBS	02	0.10
12 .	Spondyloarthopathy	05	0.26
13	Others	78	4.18

Table- II: Top ten diseases

S/N	Disease	Number of patient	%
1	PLID	403	21.60
2.	Lumbar spondylosis	215	11.52
3.	Cervical spondylosis	208	11.15
4.	CVD	205	10.99
5.	Frozen shoulder	202	10.82
6.	Low back pain	177	9.49
7.	Osteoarthritis	154	8.25
8.	Facial palsy	08	0.43
9.	Neck pain	106	5.68
10.	Rheumatoid arthritis	102	5.47

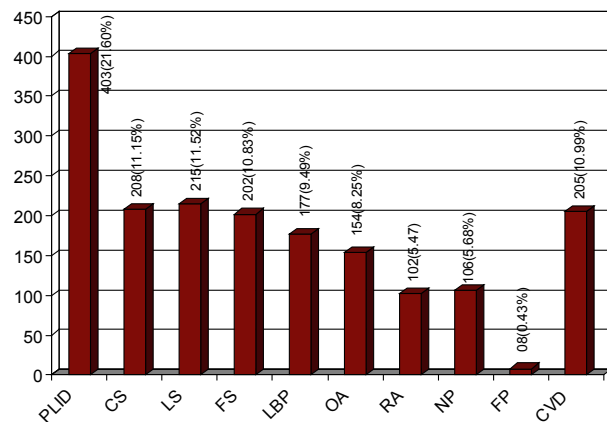


Figure-6: Top ten diseases of the patients

Discussion

In this study it has been tried to find out the age, sex, occupation, residency and disease pattern of the patients attending the dept. of Physical Medicine & Rehabilitation, KYAMCH. In this study, 46.21% of patients were male and 53.79% were female. A cross sectional study at community level for detection of painful musculoskeletal disorders by Moinuddin M, et. al. showed that musculoskeletal complaints are predominant in females⁵. Moniruzzaman M in RpMCH showed 55.1% were female patients⁶. This may be due to increased literacy rate and awareness among female patient. On the other side, government is taking strong initiative for the improvement of female health awareness. Occupation of patients were housewives (38%) followed by Farmer (32%), Service holder (7%), Businessman (5%) and Student (3%), Teacher (7%) and others (8%) of the patients. Moinuddin M et. al.⁵ found housewives were 52.33% and Nessa J et. al. were 37.3% housewife, 16.3% farmer, 15.1% service holder in their studies⁷. 6.48% of patients were under 20 years of age, 14.79% were 21-30 years, 25.14% were 31-40 years, 21.98% were 41-50 years, 17.15% were 51-60 years and 14.42% were above 60 years of age.

Moinuddin M et. al.⁵ showed most (23.36%) were between 40-49 years, Moniruzzaman M et. al.⁶ also found 49.9% were in 41-50 years age. In this study majority of patients had 21.60% were PLID, 10.99% stroke, cervical spondylosis 11.15%, lumbar spondylosis 11.52%, frozen shoulder 10.83%, low back pain 9.49%, osteoarthritis 8.25%, facial palsy 0.43% rheumatoid arthritis 5.47%, seronegative Spondyloarthopathy 0.26%, GBS 0.10% acute neck sprain/strain 5.68% and others 4.18%. Moinuddin M et. al. showed that majority of patients (44.85%) had back pain⁵. Study performed by Rahman MM et. al. at CMCH,⁸ Nessa J et. al. at Shaheed Suhrawardy MCH⁷ and Moniruzzaman M at RpMCH⁶ found highest level of back pain in their study respectively. Hasan SA et. al. documented non-specific low back pain (59.95%) as most common disease in his study⁹.

This study also shows 66.45% of patients rheumatological, 11.95% neurological & 21.60% orthopaedic and others condition. Moniruzzaman M et. al. showed 24.86% in rheumatological, 7.34% in mechanical/ rheumatological, 12.99% neurological, 8.47% were pediatric patients¹⁰. In Khwaja Yunus Ali Medical College Hospital the referral system &

interaction among different departments is improving gradually and importance of Physical medicine & rehabilitation department is being appreciated. This may be one of the reason for increasing majority of Rheumatologic patients seeking Physical medicine & Rehabilitation consultation. From the above discussion, it is clearly demonstrated that the findings of the study performed in Physical Medicine department of KYACH is consistent with the findings of different institutes of Bangladesh.

The total numbers of patients attending Physical Medicine Department have been increasing day by day. Most of the patients coming to this department from different areas of North Bengal. Moreover, referred patients are also seen from departments of KYACH especially Medicine, Neurology, Pediatrics, Nephrology, Orthopedics, Surgery, Urology, Cardiology, Cardiac surgery and Gynaecology department. In 2016 a total of 1865 new patients were given outdoor services. Subsequently, these patients came and had follow up treatment & Physical therapy management because to prevent contracture, disability, handicap and improve quality of life. This study is done in one tertiary care hospital of Bangladesh in a small population and it may not reflect the total scenario of patients getting treatment from Physical Medicine & Rehabilitation department. A uniform data system (UDS) for Medical Rehabilitation is maintained in USA and published annually. No such system exists in Bangladesh.

Conclusion A large scale multi-centered study should be performed in the country. A uniform data system should be constructed for Medical rehabilitation in Bangladesh. Maximum patients were having PLID, Cervical spondylosis, lumbar spondylosis, Stroke & Frozen shoulder.

Acknowledgement

We are extremely grateful to Prof. M. Habibur Rahman, Professor & Head, Dept. of Physical Medicine & Rehabilitation, NITOR, Dhaka. It is our great pleasure to express our regards to Murtuja Ahmed and Sheuly Khatun Dept. of Physical Medicine KYAMCH for their endless support during the study period. Special thanks are extended to Prof. Dr. Md. Zulfiker Ali, Professor & Head, Dept. of Medicine & Gastroenterology, KYAMCH for revising and correcting the manuscript.

References

1. Ganter BK, Erickson RP, Butters MA, Takata JH, Noll SF. Principle of evaluation and management. In: Delisa JA, editor. Physical Medicine and Rehabilitation-principle and practice, 5 th ed. Philadelphia: Lippincott Williams & Wilkins; 2005.p.2
2. Weiss L, Isaacson AC. General principles.In: Weiss LD, Weiss JM, Pobre T, editors. Oxford American handbook of Physical Medicine and Rehabilitation, 1st ed. Oxford : Oxford University Press; 2010. p.5.
3. O'Dell MW, Lin CD, Panagos A. The Physiatric history and physical examination, In: Braddom RL, Editors. Physical Medicine and Rehabilitation, 4th ed. Philadelphia: Elsevier ; 2011. p.3
4. Physical Medicine& Rehabilitation department, Clinical profile of disease, BSMMU, J uly/1992-J une/93.5. Moinuddin M, et. al. Presentation of painful musculoskeletal disorders: a cross-sectional study at community level. Dhaka, Bangladesh: 2nd IRF & 7th BAPMRCON publication, 2012. p.65.
6. Moniruzzaman M. A study on disease pattern of musculoskeletal disorders (MSK) among staff of Rangpur Medical College Hospital, Rangpur, Bangladesh, Dhaka, Bangladesh: 2nd IRF & 7th BAPMRCON publication, 2012. p.111.
7. Nessa J, Khan EH, Hoq T. Physical Medicine and Rehabilitation of Shaheed Suhrawardy Medical College, Dhaka, Bangladesh: 2nd IRF & 7th BAPMRCON publication, 2012. p.112-113.
8. Rahman MM, Khan AA, Ahmed S, Moinuddin M. Disease profile of indoor patients in the department of Physical Medicine and Rehabilitation, Chittagong Medical College Hospital, Bangladesh, Bangladesh, Dhaka, Bangladesh: 2nd IRF & 7th BAPMRCON publication, 2012.p.72.
9. Hasan MA, et. al., Study of spectrum of rheumatological diseases in the department of Physical Medicine & Rehabilitation, CMCH, Chittagong. JCMCTA, 2009; **20**(1); 6-11.
10. Moniruzzaman M, Islam MA, Hoque MA, Hossain MZ. A study on disease pattern of admitted patients in Physical Medicine and Rehabilitation department in Rangpur Medical College Hospital, Rangpur, Bangladesh, Dhaka, Bangladesh: 2nd IRF & 7th BAPMRCON publication, 2012.p.74-75.