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Research Article

Physiotherapist's approach and treatment preference in the patients of rheumatoid arthritis in Karachi, Pakistan: A cross sectional survey

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Abstract

Objective: To assess the treatment approach of physiotherapists towards patients with Rheumatoid Arthritis.

Material & methods: A cross-sectional study was conducted from June to August 2016 among the 116 selected participants who were working in different physical therapy setups of Karachi Pakistan. A self-constructed questionnaire was used among the participants which consist of demographic Characteristics (age, gender, Qualification, and experience). While the Knowledge and utilization related close-ended questions were the 1. Type of exercise (isometrics and isotonic exercise), utilization of manual techniques (use of Maitland peripheral joint mobilization techniques, Cyrix mobilization techniques, Mulligan mobilization techniques & Manual joint distraction). 2. The use of electrotherapy modalities (use of TENS, Ultrasound, Cryotherapy & Heating) & 3. Treatment preference includes (results of manual therapy, electrotherapy or electrotherapy & manual therapy both in combination). Data were analyzed by using Statistical Package for Social Sciences (SPSS) version 21.

Results: The majority of physiotherapists (n=71, 61.2%) belong to the age group of 31 to 45 years, and (n=71, 61.2%) were male. After checking the Qualification the majority (n=65, 56%) were Post-graduate and (n=62, 53.2%) were having 7 to 15 years of experience. Among all (n=94, 81%) of physiotherapists were using an isometric type of exercises in the patients with Rheumatoid arthritis. Most of (n=101, 87%) the Physiotherapist was using peripheral joint distraction in patients with Rheumatoid arthritis. The majority (n=109, 93.9%) of physiotherapists were using manual therapy and electrophysical agents in combination among the patients with Rheumatoid arthritis.

Conclusion: The physiotherapists who are working in different setups of Karachi were treating the patients of RA by using different techniques of manual therapy along with the combination of electrophysical agents. In electrophysical agents, they were using the tens and heating combination for pain management.

Introduction

Rheumatoid Arthritis (RA) is a chronic deforming Polyarthritits that is a challenging problem for healthcare providers as well, globally [1]. The prevalence of RA in urban areas of Pakistan is 0.142% whereas in northern Pakistan it's estimated as 0.55%. The RA occurs worldwide with a variable incidence and severity. Globally, it affects around 1% of the population, whereas it ranges between 1%–2% of the population in Western countries. Women are affected more than men. It is estimated that the prevalence of RA in

Europe and North America is higher than in China, Japan, Malaysia, Indonesia, the Philippines, and even rural Africa. It is also noted that some specific populations in Europe may have a considerably low prevalence of RA like Italy, which is around about 0.33% [1,2]. The RA can begin at any age, but the likelihood increases with age. The onset of RA is highest among adults. The New cases of RA are typically two-to-three times higher in women than men. The Sign and symptoms of RA are pain, swelling, tenderness, and stiffness, which is more pronounced in the morning. The Morning RA pain can last for 30 minutes or longer. RA can also cause tingling or burning



sensations in the joints [3]. Rheumatoid Nodules, Symmetrical Patterns of affected joints most common joints involved are Proximal Interphalangeal (PIP) and Metacarpophalangeal (MCP) joints of the hands, the wrists, and small joints of the feet including the Metatarsophalangeal (MTP) joints [2,4]. The shoulders, elbows, knees, and ankles are also affected in many patients. The cause of Rheumatoid Arthritis is still unknown. RA is an autoimmune condition, which means it's caused by the immune system attacking healthy body tissue. However, it's not yet known what triggers this. The risk factors for RA are smoking, gender & genetics. The Ideal consideration of patients with RA comprises an incorporated methodology that incorporates both pharmacologic and nonpharmacologic treatments [1,5]. The various nonpharmacologic medicines are accessible for this disease that includes exercise, diet, massage, counseling, stress decrease, physical therapy, and surgery. Active participation of the patient and family in the plan and execution of the therapeutic program helps support assurance and guarantee consistency, as does clarify the reasoning for the treatments utilized. Prescription-based treatments contain a few classes of sagens, including Nonsteroidal Calming Drugs (NSAIDs), nonbiologic and biologic illness altering antirheumatic drugs (DMARDs), immunosuppressant's, and corticosteroids. Early treatment with DMARDs has turned into the norm of care, since it can both retard infection movement more proficiently than later treatment and, conceivably, initiate more abatements. In physical therapy, there are two types of management (electrotherapy & manual therapy), and in these treatments, there are different techniques that are being used to subside the pain and to improve the functional status of a patient [6].

Materials and methods

Study design, settings and duration

A cross-sectional descriptive study was conducted from June to August 2016 and data was collected from the Institute of Physical Medicine & Rehabilitation, Dow University of Health Sciences Karachi, Pakistan.

Sampling

Convenient Non-Probability Sampling Technique among the 116 selected participants was used. Participants must be physical therapy graduates at least, both genders (male & female), having the age 24 years and above and working in the clinical setup were included in the study. While undergraduate participants, having the age less than 24 years, not working in any physiotherapy clinical setup, and were not willing to sign informed consent were excluded.

Data collection tool

A self-constructed proforma was used to collect the data, which include the demographic Characteristic age, gender, Qualification, and experience. While the Knowledge and utilization related close-ended questions were the 1. Type of exercise (isometrics and isotonic exercise), utilization

of manual techniques (use of Maitland peripheral joint mobilization techniques, Cyrix mobilization techniques, Mulligan mobilization techniques & Manual joint distraction). 2. The use of electrotherapy modalities (use of TENS, Ultrasound, Cryotherapy & Heating) & 3. Treatment preference includes (results of manual therapy, electrotherapy or electrotherapy & manual therapy both in combination).

Data collection procedure

The data was collected from the physiotherapist who was working in a different clinical setup. The selected participants were asked to fill the self-constructed questionnaire on the spot only minor help was given upon request of the participant.

Data analysis procedure

Descriptive statistics: Categorical variables were measured as frequency and percentage. Data was analyzed by using Statistical Package for Social Sciences (SPSS) version 21.

Ethical concern

The Ethical approval was taken from the Review Committee of the Institute of Physical Medicine & Rehabilitation, Dow University of Health Sciences Karachi, Pakistan. Informed consent was taken from the participants that their participation is voluntary, information will be kept confidential and they can leave the study anytime.

Results

Demographic characteristics

Demographic Characteristics are described in Table 1, which shows that majority of physiotherapists (n=71, 61.2%) belong to the age group of 31 to 45 years, and (n=71, 61.2%) were male. After checking the Qualification the majority (n=65, 56%) were Post-graduate and (n=62, 53.2%) were having 7 to 15 years of experience.

Table 1: Demographic Characteristics.

Characteristics	Frequency(n=116)	Percentage (%)
Age group		
24-30 years	42	36.2
31-45 years	71	61.2
45 and above	03	2.58
Gender		
Male	71	61.2
Female	45	38.7
Qualification		
Graduate	51	43.9
Post-graduate	65	56
Doctorate	00	00
Experience		
1 to 6 years	35	30.1
7 to 15 years	62	53.4
More than 15 years	19	16.3

Type of exercise

Type of exercise is described in Table 2 which states that the majority (n=94, 81%) of physiotherapists were using an isometric type of exercises in the patients with Rheumatoid arthritis, followed by (n=86, 74.1%) both isotonic and isometric exercise at the same time.

Use of manual therapy & electro physical agent

The use of Manual Therapy & Electrophysical Agents collectively is described in Table 3 which states that the majority (n=101, 87%) of Physiotherapists were using peripheral joint distraction in patients with Rheumatoid arthritis followed by (n=98, 84.4%) Maitland peripheral joint mobilization. In electrophysical agents the majority (n=109, 93.9%) of physiotherapists were applying heating, followed by (n=107, 92.2%) were using TENS for pain management.

Treatment preference

Treatment Preference is described in Table 4 which states that the majority (n=109, 93.9%) of physiotherapists were using

Table 2: Type of exercise

Type of Exercise	Yes Frequency (%)	NO Frequency (%)
Do you prefer the isometrics exercises in RA patients?	94(81)	22(18.9)
Do you prefer the isotonic exercises in RA patients?	20(17.2)	96(82.7)
Do you prefer the isotonic & isometrics at the same time exercises in RA patients?	86(74.1)	30(25.8)

Table 3: The use of Manual Therapy & Electrophysical Agent.

Use of Manual Therapy & Electro Physical Agent	Yes Frequency (%)	NO Frequency (%)
Manual Therapy		
Do you prefer the Maitland peripheral joint mobilization techniques among the patients of RA?	98(84.4)	18(15.5)
Do you prefer the Cyrix mobilization techniques among the patients of RA?	20(17.2)	96(82.7)
Do you prefer the Mulligan mobilization techniques among the patients of RA?	17(14.6)	99(85.3)
Do you prefer the Manual joint distraction among the patients of RA?	101(87)	15(12.9)
Electrophysical Agent		
Do you apply the TENS on the patients of RA?	107(92.2)	09(7.75)
Do you apply Ultrasound on patients with RA?	19(16.3)	97(83.6)
Do you apply Cryotherapy to patients with RA?	21(18.1)	95(81.8)
Do you apply the Heating on the patients of RA?	109(93.9)	07(6.0)

Table 4: Treatment preference.

Treatment Preference	Yes Frequency (%)	NO Frequency (%)
Does manual therapy give you good results in RA patients?	79(68.1)	37(31.8)
Does electrotherapy give you good results in RA patients?	31(26.7)	85(73.2)
Does electrotherapy & manual therapy both in combination give you good results in RA patients?	109(93.9)	07(6.0)

manual therapy and electrophysical agents in combination among the patients of Rheumatoid arthritis, followed by (n=79, 68.1%) just manual therapy techniques separately.

Discussion

The current study disclosed that most of the physiotherapists who were working in different clinical setups in Karachi, Pakistan were treating the patients of Rheumatoid Arthritis (RA) by using the different techniques of manual therapy along with the combination of electrophysical agents. The majority of physiotherapists were using manual distraction techniques along with the combination of Transcutaneous Electrical Nerve Stimulation (TENS) and heating. A study conducted by Christina, et al. in 2003 and concluded that throughout the world the clinical usefulness of exercise is beneficial for the patient of RA whereas the exercises improve the health and fitness of muscles [7,8]. Furthermore, the study conducted by Häkkinen, et al. in 2004 and concluded that the moderate to high-intensity exercises training programs have better training effects on muscle strength as compared to low-intensity training programs, moreover the high-intensity training program reduces the risk of fractures among the patient of RA [1,3,9]. Exercise therapy was found effective intervention for the management of different musculoskeletal conditions, in musculoskeletal conditions, the more focus was on arthritis [10]. Exercise therapy improves the health-related quality of life among patients with arthritis [11,12]. The majority of physiotherapists consider manual therapy as the best non-pharmacological intervention because it gives good results among the patients along with the least side effects. According to the different surveys which were conducted in different parts of the world, the exercises help in decreasing the pain and improve the range of motion in affected joints, after that the patient performs the activities of daily routine easier and more effectively [13-15]. Furthermore, it has been also proven that manual joint distraction is also used full for decreasing pain and increasing the range of motion. However, electrophysical agents are effective in pain management. The use of manual therapy along with the combination of Electrophysical agents was found more frequently practiced among the physiotherapists of Karachi, Pakistan [16-18].

Conclusion

Among the patients of RA, both manual therapy and electrophysical agents are effective but where both manual and electrophysical agents are used in combination they are most effective and it also improves the health-related quality of life among RA patients.

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Author contributions

All authors contributed equally.

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