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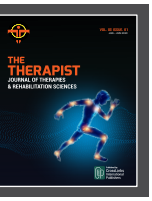

Original Article

Quality of Life in Patients with Knee Osteoarthritis

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ABSTRACT

Osteoarthritis is a joint degenerative disease. Old age is the usual cause of knee osteoarthritis. Knee osteoarthritis affects quality of life (physical, social and psychological) of patient and can cause other health related problems. Most people who undergo knee osteoarthritis have serious consequences, which affect their quality of life. **Objective:** The purpose of this study was to evaluate the quality of life in patient by knee osteoarthritis. **Methods:** This was a cross sectional study that was conducted in Lahore, Pakistan in 2017. The sample size of 192 was taken with the age range of 30 to 70 years. SF-36 V2 extracted questionnaire was used to find out the quality of life in patients by knee osteoarthritis. People were asked about the effect of knee osteoarthritis on their physical, social and psychological health and result was calculated. **Results:** Quality of life was seen in 192 individuals having knee osteoarthritis with mean age of 47.66 years (range from 30 to 70). A strong impact of osteoarthritis was found on quality of life of such patients. Physical health limitation was found to be 59.9% and psychological impact was 49.5%. **Conclusions:** It was concluded that people with knee osteoarthritis had poor quality of life. Their physical, social and psychological health was compromised to a healthy individual.

INTRODUCTION

Osteoarthritis (OA) is a joint degenerative disease, which results from breakdown of joint cartilage and underlying bone. The world's most common community health problem is knee osteoarthritis mostly affecting old age people. Knee osteoarthritis has negative effect on quality of life that varies from person to person. Old age is the leading cause of (OA) in developing countries. Female suffers more than men from OA of knee [1,2]. The prevalence of knee pain is 46.2% in general (58.0% in women and 32.2% in men). In 10.3%, 9.1% and 26.8% of patients, pain may be within close proximity of left, right or may be present in both knees respectively. The prevalence of unilateral knee pain is found to be 10.3% and 16.1% in both knees. The knee pain prevalence is considerably higher in women than in men. In women occurrence of knee pain increases with age range of 30 to 70 years. In men the prevalence of knee pain does not increase with age as compared to women [3]. The occurrence of knee pain and symptomatic knee osteoarthritis can be decrease 10 to 25% by alteration in body mass index and additional age adjustment [4]. Etiologies of osteoarthritis are numerous. Old age people, female gender, overweight, injury to the knee, rhythmic use of joints, abnormal joint or limb development, loss of strength in muscles, injury and laxity of joints all play a part in the development of knee joint osteoarthritis [5]. Trauma to the knee joint can also cause osteoarthritis. The risk of knee osteoarthritis increases 3.86 times due to earlier knee trauma. In extreme cases, it can lead to severe pain and limitation of physical activities. The joint begins to "wear out" due to use or overuse, which cause the cartilage that act as a cushion the bone ends in the joint to deteriorate. Elderly people are at more risk as with the passage of time bones density reduce and bones become more fragile [6]. Risk factor of osteoarthritis are

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extrinsic (occupational) and intrinsic (personal). Kneeling and squatting are considered main primary risk factor in correlation with knee disorders. Occupation involving squatting or kneeling more than two hours daily were associated with increased risk of moderate to severe knee osteoarthritis. Inflammation after miniscal surgery, mechanical forces, obesity and repetitive use of knee joint may cause a contributive part in the development of osteoarthritis in knee [7,8]. Physiotherapy plays an important role in osteoarthritis. A patient instruction in self-management, well-designed balance training and gait has been recommended. The use of intra-articular corticosteroid injections, braces and heel wedges provided a better role in decreasing pain and improving physical functions [9,10]. Appropriate treatment modalities for all participants with knee osteoarthritis included biomechanical interventions, exercises (on land and in water), strengthens training, self-education, and managing. Physical functioning seems to be improved by therapeutic exercise programs such as walking and other activities [11]. The first line treatment in medicine is Acetaminophen. However, the use of glucosamine, capsaicin cream, contemporary nonsteroidal anti-inflammatory drugs (diclofenac) and acupuncture may provide some benefits. Those above mentioned drugs may also have unfavorable results; therefore, the patient who was receiving these drugs should be careful and monitored properly. Intra-articular corticosteroid injections also have some role in management osteoarthritis of knee [12,13]. It has been shown that the Arthroscopic surgery in knee osteoarthritis has no advantage. If symptomatic treatment is ineffective than total joint arthoplasty of the knee should be well thought-out [14]. Rationale of this study was help in raising awareness about physical, social and psychological life in-patients with osteoarthritis of knee and the impact of osteoarthritis on physical functioning, social health and psychological problems.

METHODS

It was a cross sectional survey. Data was collected from Services Hospital, Jinnah Hospital and Social Security Hospital in Lahore, Pakistan 2017. Permission was taken from university ethical review committee. This study was completed in estimate period of 4 months. The sample size of 192 participants was taken with the age range from 30 to 70 years. SF-36 V2 extracted questionnaire was used which included physical examination, psychological and social health to evaluate the quality of life in-patient by knee osteoarthritis. Individuals were asked about the effect of knee osteoarthritis on their physical, social and psychological health and result were calculated. In this study convenient sampling technique was used. The inclusion criteria were all those participants who presented with knee pain from past 4 weeks, stiffness from last 30 minutes, age between 30 to 70 and both male and female were included in this study. The exclusion criteria were all those participants who had medical conditions (kidney and liver disease, deep vein thrombosis), malignancy, trauma or any bleeding disorder and people with other disabilities.

RESULTS

Limitation	Bending or stooping	Walking more than a mile
	Frequency(%)	Frequency(%)
Yes limited a lot	64(33.3%)	64(33.3%)
Yes limited a little	127(66.1%)	123(64.1%)
No not limited at all	1(0.5%)	5(2.6%)
	Walking several hundred yards	Bathing or dressing yourself
	Frequency(%)	Frequency(%)
	155(80.7%)	4(2.1%)
	35(18.2%)	55(28.6%)
	2(1.0%)	133(69.3%)

Table 1: Limitations in performing physical work/ activities

The study was conducted to evaluate the quality of life in patients by knee osteoarthritis. The study population consisted of n=192 of which n=142 (74.0%) were female and 50 (26.0%) were male. The result shows that old age is the most common cause of osteoarthritis. The mean value of age was 47.66 years and standard deviation was 9.382. Minimum value of age was 31 years and maximum age value was 67 years. Majority of the participant has problem in performing physical activities as shown in (table 1).

Physical health and emotion	Cut down amount of the time	Limited in kind of the work or activities
	Frequency(%)	Frequency(%)
All of the time	20(10.4%)	28(14.6%)
Most of the time	74(38.5%)	115(59.9%)
Some of the time	71(37.5%)	44(22.9%)
A little of the time	26(13.5%)	4(2.1%)
	Difficulty performing work or other activities	Felt downhearted and depressed
	Frequency(%)	Frequency(%)
	128(66.7%)	18(9.4%)
	54(28.1%)	95(49.5%)
	7(3.6%)	60(31.2%)
	2(1.0%)	19(9.9%)

Table 2: Physical health and Psychological problems

Result shows that the participants have physical problems while performing work or other activities. They usually decrease the duration of time while performing activities. 49.5% participants show some psychological problems like depression and anxiety as shown in (Table 2).

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	Physical health and emotional problems	Pain interfere normal work
	Frequency (%)	Frequency (%)
Extremely	10(5.2%)	6(3.1%)
Quite a bit	10(5.2%)	12(6.2%)
Moderately	30(15.6%)	57(29.7%)
Slightly	61(31.8%)	116(60.4%)
Not at all	81(42.2%)	1(0.5%)

Table 3: Pain interference in work and emotional problems

Pain interferes in performing their normal work. 60.4% peoples show slightly pain that may increase during an activity as mentioned in the table 3.

DISCUSSION

In the study quality of life was assess among 192 individual who had developed knee osteoaarthritis. The study conducted by L Engebretsen to investigate the connection between radiographic tibiofemoral knee osteoarthritis and knee pain, symptopms, purpose and knee related quality of life 10 to 15 years after Anterior cruciate ligament restoration. This study indicates the poor quality of life in patient with knee osteoarthris or 10 to 15 years after anterior cruciate ligament restoration [15]. Similarly the result of the present study also shows the poor quality of life in patient with knee osteoarthritis.The finding shows that patient with knee osteoarthritis have limitations in performing physical activities. Berat Meraym Alkan conducted a study to evaluate the quality of life in patient by knee osteoarthritis and to determine its relationship with conventional clinical measure and self reported disability. SF-36, WOMAC and VAS were used to assess physical functioning, pain and disability respectively. The patient with knee osteoarthritis had significantly low quality of life. Pain and of quality of life did not show correlation with comorbidity with knee osteoarthritis. The result shows SF 36 and WOMAC pain score were more severe in female patient [16]. Similarly the result of the present study also shows the quality of life in patient with knee osteoarthritis that is most frequent in old age and female are at more risk for development of knee osteoarthritis. The study conducted by Fioravanti, Antonella in 2012 . The aim of this study were to assess whether balneotherapy with mineral sulphate-bicarbonate-calcium water could determine symptomatis enhancement and to detect any change in the quality of life of patients by osteoarthritis in knee. The study was randomized, single blind controlled trial. The Patients were evaluate by Visual Analogue Scale (VAS) for natural pain,SF-36 and Arthritis Impact Measurement Scale.The outcome corroborate the beneficial effects of balneotherapy in patients with knee osteoarthritis last over time and significant improvement in physical functioning and quality of life [17]. Contrarily the present study shows the quality of life among people who had undergone knee osteoarthritis and it was assessed by SF-36 extracted form. The study was cross sectional. Bruyere, Olivier conducted a study in 2012. The aim of this study was to evaluate health related quality of life in a prospective study with 7 years of follow-up in 49 consecutive patients who had a total knee joint replacement because of osteoarthritis. The outcome tool used in this study was short form of SF-36 and WOMAC to assess the quality of life and disability. 56.4% patients had hip replacement surgery and 43.6% had knee replacement. The study found that six months after surgery a significant improvement was observed in physical function and pain [18].The result of present study shows that 59.4% people have difficulties in performing physical activities and low quality of life. Losina, Elena conducted a study in 2011 to assess the quality of life due to obesity, knee osteoarthritis on morbidity and mortality in older Americans and health benefits of reducing obesity. The data was collected from US population from aged 50 to 84 years.The result of the study showed that the quality of life was poor due to knee osteoarthritis and obesity. It was also observed that by reducing body mass would yield substantial health bene fits. The result of present study also shows the poor quality of life in patient wuth knee osteoarthritis either in obese or nonobese people [19]. Contrarily in present study the data was collected from Jinnah Hospital, Services Hospital and Social Security Hospital in Lahore,Pakistan. The data was collected age group from 30 to 70 years. The study conducted by Ippolytic papakostidou in 2012 who have investigate the outcomes and factor influencing quality of life after total knee arthroplasty. The outcome tool used in this study was WOMAC and VAS to assess disability and pain respectively. The study found that patient presented with poor quality of life at 6 weeks after surgery [20]. Similarly the result of the present study also shows low quality of life in patient by osteoarthritis of knee.

CONCLUSIONS

Osteoarthritis was the most common problem among old age peoples. Knee osteoarthritis has negative effect on quality of life. It disturbs physical health and cause limitation and difficulties in performing work or daily activities. 49.5% participants feel depressed and downhearted. Knee osteoarthritis affects different aspects of life of an individual, which varies from person to person.

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