Socio-Demographic Characteristics of Osteoarthritis Patients in Turkey and Physicians’ Therapeutic Approaches

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ABSTRACT
Objectives: With increased life expectancy throughout the world, the prevalence of musculoskeletal system disorders among the elderly has become an important health care concern in many countries. Osteoarthritis in particular is among the leading causes of chronic disability in the older population.

Aims: This study aims to assess osteoarthritis patients with respect to demographic characteristics and investigate the therapeutic approaches of primary care physicians for treating patients who are diagnosed with this disorder.

Methods and Materials: This cross-sectional study was performed at primary health care centers in which osteoarthritis could be diagnosed and treated by primary care physicians.

A pre-tested and validated form was used to obtain disease characteristics of patients who were diagnosed clinically as having osteoarthritis. These forms were then evaluated by using the “Investigator Global Assessment of Disease Status” system.

Results: A total of 210 physicians and 13,203 patients (52.6% female and 47.4% male) enrolled in the study. Almost 98.4% of patients were prescribed at least one pharmacological agent. Non-pharmacologic approaches including physical therapy and rehabilitation, recommendations for dietary changes, and nutritional treatment, surgical weight loss methods, and other alternative treatment modalities were also commonly suggested.

Conclusion: Osteoarthritis is commonly diagnosed and treated in the primary care setting. Therefore, updated osteoarthritis diagnosis and treatment protocols should be a part of the continuing medical training of primary care physicians.

INTRODUCTION
The World Health Organization and the United Nations has declared the decade...
of 2000 to 2010 the “Bone and Joint Decade.”1 As life expectancy has increased throughout the world, musculoskeletal system disorders have emerged as important health care concerns for the elderly.

The most common musculoskeletal disorder is osteoarthritis, a leading cause of chronic disability among the aged.2 Prevalence studies demonstrate that osteoarthritis is present in the majority of persons aged over 65 years and in approximately 80% of persons over 75 years of age.

Epidemiologic studies indicate a variance in osteoarthritis prevalence among communities. Studies conducted in Europe and the United States have shown the two countries to have similar rates of occurrence for osteoarthritis of the hand and knee,3 however, Hispanics residing in United States were found to have a lower rate of osteoarthritis than other ethnic groups.4 Studies have also shown that the prevalence is lower in Jamaicans, Asian Indians, and Nigerians than in Europeans.5

Apart from its higher rate of occurrence in the advanced age population, another important characteristic of osteoarthritis is the costs of treatment. Elderly people are the group that has the largest contribution to total health-care costs of osteoarthritis. Expenditures for the population over 45 years of age constitute more than two-thirds of total cost. Studies in western countries where health care data and statistics are well documented give an idea about this situation. In an American study, the total direct and indirect cost of musculoskeletal system disorders in 1992 was reported to be approximately $150 billion. This constitutes about 2.5% of this country’s Gross National Product.6

Turkey is situated in between Asia and Europe. Although Turkey has a relatively younger population compared to European countries, life expectancy at birth increased in recent years and elderly health has become a major challenge also for this country. There is very little epidemiologic data for osteoarthritis among the Turkish population. To date, no studies assessing primary care physicians’ therapeutic approaches to osteoarthritis have been performed.

This study, known as the ROTA (Rheumatism Follow-up) study, aims to assess the demographic characteristics of osteoarthritis patients in Turkey with respect to such as age and gender and to investigate the therapeutic approaches of primary care physicians for treating osteoarthritis patients and thus, to obtain basic data required for future epidemiologic research.

**MATERIALS AND METHODS**

**Data Gathering**

Primary care physicians working in seven geographic regions (namely, Mediterranean, Black Sea, Marmara, Aegean, Central Anatolia, Eastern, and South-Eastern Regions) of Turkey who actively diagnose and treat osteoarthritis patients participated in this study. These physicians responded affirmatively to the invitation for study and participated in the study voluntarily and without being paid. Patients who voluntarily accepted to participate in the study gave written informed consent having been informed about the study. The patients were not been paid for their participation.

After a diagnosis of osteoarthritis had been made clinically by the primary care physicians and by laboratory examinations, qualified patients were identified. A standard form was delivered to all participating physicians in advance. Disease characteristics of the patients were evaluated using the investigator global assessment of disease status (IGADS) system. The physicians instructed all volunteer patients to com-
complete the form during 12 months of study and the forms were gathered at a single center for data entry and statistical analyses. Data analysis was done by using SPSS 11.0 package software (SPSS Inc., Chicago, IL). Numerical data were expressed as arithmetical means ± standard deviations and in figures and as percentages.

**RESULTS**

A total of 210 physicians and 13,203 patients from seven geographic regions participated in the study. Of 13,203 osteoarthritis patients, 52.6% (n=6947) were female and 47.4% (n=6256) were male. As for distribution according to age groups, 1341 patients were younger than 40 years of age, 1573 were in the 40-49 year age group, 2347 in the 50-59 age group, 3105 in the 60-69 age group; 3299 in the 70-79 age group, 1153 were over 80 and there was no age data recorded for the remaining 385 patients (Figure 1). When we looked at therapeutic approaches of physicians, it was observed that 98.4% of patients diagnosed with osteoarthritis were prescribed at least one pharmacological agent (n=13,002). Non-pharmacological therapeutic approaches were also recommended to 94.7% of the patients (n=12505). These approaches included physical therapy and rehabilitation, dietary changes and nutritional treatment and/or surgical methods for weight loss, exercise, and other alternative treatment modalities (Figure 2). According to IGADS, disease status of 1.6% of patients (n=214) were very poor, 37.0% were (n=4883) evaluated as poor, 37.8% (n=4990) as fair, 6.1% (n=809) as good, and 1.1% (n=145) as very good. Evaluations for 2162 (16.4%) patients could not be performed due to several reasons including time constraints and forgetfulness of the physicians.

*Figure 1: Distribution of participants according to age groups.*
DISCUSSION

This study is important because it is the first to provide data from a large sample over a diverse geographic region thereby allowing for comparison with international data. Another powerful aspect of this study is that the osteoarthritis diagnosis of patients was not based on self-reporting and it was evaluated by a standard questionnaire performed by the physicians.

Expectedly, gender distribution showed a small difference in favor of female gender in our study. This finding is consistent with other studies in the literature.\textsuperscript{6,9}

Previous studies have shown osteoarthritis prevalence correlates with age and its incidence in all joints increases in all joints with advancing age.\textsuperscript{6,10} This study had similar findings. Our results showed the highest prevalence to be among the 70-79 year-old age group, with a similar rate observed in the 60-69 year age group.

Turkey has a young population. Although the life expectancy reached the seventh decade in recent years, it is still substantially lower than that of other industrialized countries in Europe and that of the United States, which has a mean life expectancy of 69.8 years according to 2003 State Institute of Statistics (DIE) data. The age distribution of osteoarthritis is similar between European countries and Turkey. The majority of osteoarthritis cases in the studies performed in the countries like United States, United Kingdom and Netherlands are patients over 65 years of age. In a study of Mexican Americans living in the United States, osteoarthritis prevalence varied between 40-45% in the population over 65 years of age. The authors stated that these percentages were lower than those for other ethnic groups in USA.\textsuperscript{7}. According to the Canada National Health Survey, the highest prevalence is among the people born in Europe and the lowest is in the people born in Asia, and the incidence increases with advancing age, reaching a
minimum of 17.4% (age ≥70 years, born in Europe) and a maximum of 43.5% (age ≥70 years, born in Asia). Nevitt et al reported that China has one of the lowest reported rates of osteoarthritis. That study found a prevalence of only 1% among Chinese citizens aged 60-89 years.

Another interesting finding of the present study concerns therapeutic approaches of primary care physicians for osteoarthritis. Although this disorder has a high prevalence, data regarding patient management in the primary care setting are scarce. Studies assessing therapeutic approaches for osteoarthritis are mostly related to comparisons of pharmacologic therapies, the role of surgical interventions, and the treatment choices of different physicians.

Step-wise therapy is still an up-to-date modality in osteoarthritis treatment and patient education, exercise programs, and weight-loss programs are usually the first choices of the physicians. However, in our study it was observed that the great majority of the patients received pharmacological therapy (98.4%) and contrary to what is expected, non-pharmacological therapeutic approaches such as patient education, exercise programs, and weight-loss programs were second choices instead of being the first step.

Stratification of treatment priorities is controversial. When we consider that the status of 7.2% of the patients was considered to be good or very good, discordance between the treatment approach and the clinical picture may be seen. Several interpretations regarding its causes might be made and further research is needed.

The most important factor, lack of adequate time spent for each patient due to large number of patients in primary care outpatient clinics, is believed to make non-pharmacological treatment approaches second choices. Also, inadequate postgraduate education of physicians on the subject of alternative therapies often leaves physicians with the assumption that drug therapy will achieve more rapid and definite results and those patients will more easily comply with this kind of treatment.

CONCLUSION
This study found that, in Turkey, osteoarthritis occurs more frequently among women than men and most commonly after the fourth decade of life. It also showed that this disorder is most often treated by primary care physicians and that pharmacotherapy is the generally the first therapeutic choice among primary care physicians.

As this study was conducted exclusively among patients who have been diagnosed with osteoarthritis, it can shed light on future studies by its contribution to international data on demographic characteristics of osteoarthritis cases in Turkey. It does not, however, provide data regarding the overall prevalence of osteoarthritis in Turkey. Osteoarthritis follow-up and treatment protocols used by primary care physicians should be periodically reviewed.

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REFERENCES


