

Gonarthrosis Prevalence in the Elderly, its Associated Factors and Degrees of Disability

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ABSTRACT

The Gonarthrosis arthropathy is the most prevalent disease worldwide and the most common cause of disability for wandering in the elderly. More than a degenerative disease, it is the clinical and pathological outcome of a multifactorial group of processes of different etiology. Describe the state of the art regarding the prevalent radiological degree of Gonarthrosis in elderly patients, as well as the possible factors associated with the disease. A critical analysis "systematic review" of publications indexed in databases like PubMed and CROSSREF was performed by using the keywords: Knee osteoarthritis, Epidemiology, Treatment, Therapy. Proposals of various types of treatments were found, as well as methods for measuring cartilage loss in 43.9% and 55.6%, epidemiology data in 6.9% and 8.6%, in terms of the different types of therapy for this disease, this was mentioned in 40.6% and 35.5%. There is evidence that shows that Gonarthrosis is a public health problem, which is a disease to be studied with greater interest and above all; making greater emphasis on early detection. As discussed before, there is high economic impact in primary care, which reveals that the Gonarthrosis is a problem of social interest and certainly a challenge for public health.

Key words: Associated factors, disability, elderly, gonarthrosis, public health problem.

INTRODUCTION.

The World Health Organization (WHO, 2003) notes that rheumatic diseases are the third most important problem in industrialized countries and health, including osteoarthritis which is the most common since it affects 80% of the elderly population in industrialized countries. It is expected that the increase in life expectancy and the aging of the population will make osteoarthritis the fourth leading cause of disability in 2020 (Woolf et al, 2003)¹. Osteoarthritis is the most important cause of functional locomotors disability in all races and geographical areas². Due to population aging,

arthritis affects up to 30% in those over 65 years³⁻⁵ and 9.6% of men and 18% of women over 60 years⁶ it is the fourth leading cause of morbidity and it is the most common cause of knee pain from the age of 50; although it is a degenerative joint disease whose main responsible factors are longevity, genetics and obesity; this represents the most prevalent disease in senior citizens, besides being the most frequent cause of permanent disability, at least of working nature^{6,7}.

The Subcommittee on Osteoarthritis of the American College of Rheumatology Diagnosis (ACR) and Therapeutic Criteria Committee defines

osteoarthritis as a heterogeneous group of conditions that cause joint symptoms and signs associated with defects in cartilage integrity, plus related subchondral bone changes with the joint margins. Its main features are intermittent mechanical pain, burden pain, light hidrartrosis and joint instability and degenerative signs in radiology are located initially in the patella femoral joint to evolve after the femorotibial. Arthropathy is the most prevalent disease worldwide and the most common cause of disability for wandering in the elderly. More than a degenerative disease, it is the clinical and pathological outcome of a multifactorial group of processes of different etiology^{8, 9}.

Radiology (RX) is the simplest pattern that determines the presence or absence of osteoarthritis. In studying the progression of osteoarthritis by XR, changes in the joint spaces are compared as well as the appearance of bones and osteophyte changes in subchondral bone. To qualify these changes the scale of degrees of radiological osteoarthritis of Kellgren and Lawrence². is used.

It is estimated that knee osteoarthritis affects 10% of the population over 55, from which, one in every four patients are severely disabled; this produces a high social and economic cost, which has even been mentioned in comparative studies; the disease is compared with rheumatoid arthritis. Some studies conclude that despite being rheumatoid arthritis a more severe disease than knee osteoarthritis, Osteoarthritis of the knee is the most prevalent, which implies a global impact higher than thirty times Rheumatoid arthritis⁹⁻¹¹ in addition to the magnitude that impacts the style and quality of life of people, the loss of working hours, high consumption of drugs and the use of different resources that modify the activity and stability of the family, as well as health institutions. Osteoarthritis, in 5% of cases, can generate some sort of disability allowance and nearly 10% of patients are functionally impaired^{1, 8, 13}.

Aim

Describe the state of the art regarding the prevalent radiological degree of Gonarthrosis in elderly patients, as well as the possible factors associated with the disease.

Methods

A critical analysis "systematic review" of publications indexed in databases like PubMed, Thompson Reuters and CROSSREF was performed by using the keywords: Knee osteoarthritis, knee, Epidemiology, Treatment, Therapy. After data collection a selection of information was conducted in reference to patients of both genders, older than 60 years old being diagnosed with Gonarthrosis.

RESULTS

Proposals of various types of treatments were found, as well as methods for measuring cartilage loss in 43.9% and 55.69%, epidemiology data in 6.9% and 8.69%, in terms of the different types of therapy for this disease, this was mentioned in 40.6% and 35.54%.

Moreover, data showed that Gonarthrosis is a disease with a strong impact on the lives of people, being this disability the main consequence of suffering. The evidence collected raises concerns in diagnosing the disease at early stages as well as the creation of recommendations that could contribute to decrease the degree of disability and improve the quality of life of patients. It is important to note that, most of the studies are only related to the quality of life of patients with knee osteoarthritis before and after the joint replacement was reported; such as the cost of knee osteoarthritis in life expectancy and Rona Ramon Sílvia surgery and studies related to physical therapy as is the case in the emerging Criocinthis Gonarthrosis by R. Jimenez Corners, the economic impact in primary care by JC Lorenzo Vidal and M. Acasuso⁷. Gonarthrosis: economic impact on primary care and diagnosis, treatment and follow-up arthroscopic by Nordelo Martinez.

DISCUSSION

A literature review of articles related to Gonarthrosis was conducted. It was found that the majority of such articles related to Gonarthrosis talk about the different types of treatments that are offered to people with this disease, the majority emphasizes the use of physiotherapies, medical treatments and the efficiency of those.

This requires the design of strategies that promote early diagnosis of Gonarthrosis, which should be the main interest of studying the disease, as we know, it is a disease that is mostly diagnosed at advanced stages, leading a poor list of options or offers of treatments for patients, among which there is always the possibility of reaching inability to walk or replacing the joint.

This critical analysis aims to contribute to the early interest of the disease, not expecting the symptoms to appear but to prevent the disability.

It is expected that this study generates initiatives to reach the enrichment of work done for the good of others for the benefit of people who require or have better life conditions and better quality of life by proposing further investigation of the subject that could allow the early detection of this disease.

It is mentioned that human beings are always affected by osteoarthritis. In fact,

osteoarthritis is the most common rheumatic disease in the population. Inhabitants above the age of 50 are most likely to present it¹² but virtually everybody has radiological manifestations of this disease, affecting any joint, but more commonly is the knee joint the one with more manifestations due to its burden conditions. Thus, in order to apply a treatment to a patient suffering from osteoarthritis a theoretical and practical study of this disease and its peculiarities is necessary. There are several definitions on the characteristics of knee osteoarthritis. Those addressed by Dr. JM Moll (1990) established that osteoarthritis is a degenerative disease of the synovial joints, commonly associated with lower inflammatory signs, due to a primary cartilage disorder that is characterized by an articular cartilage degenerative process of the knee and secondary changes that occur after that¹⁴.

The main symptom of patients with knee osteoarthritis is pain. At first, the pain is very mild, only appears when there has been a very important

Table. 1: Frequency and percentage of items identified in the network by Pub Med search according to keywords. Knee Gonarthrosis.

Keywords	Frequency	Percentage
Knee Gonarthrosis	2720	8.6%
Gonarthrosis Treatment	13973	43.9%
Gonarthrosis Epidemiology	2188	6.9%
Gonarthrosis Therapy	12918	40.6%
Total	31799	100%

Source: Direct, Pubmed, 2014 "using only the keyword Gonarthrosis, total items found corresponds to 2801.

Table. 2: Frequency and percentage of items identified in the network by searching in CROSSREF according to keywords. Knee Gonarthrosis

Key Words	Frequency	Percentage
Knee Gonarthrosis	1020	0.068%
Gonarthrosis Treatment	829 888	55.69%
Gonarthrosis Epidemiology	129 548	8.69%
Gonarthrosis Therapy	529 723	35.54%
Total	1490179	100%

Source: Direct, CROSSREF, 2014 "using only the keyword Gonarthrosis, total items found corresponds to 3400.

physical activity (eg, after a long walk) and fades promptly with rest. When the disease is established, it is normal for the patient to note major inconvenience when starting to walk; symptoms decrease after a walk, once the joint "warms". When pain is added, there is a feeling of stiffness and difficulty for flexing and extending the leg, which, like pain, is also more intense after spending a long time at rest (sitting or after sleeping in bed). Another symptom you may notice is that the patient feels a snapping sensation, which occurs when bending the knee. The knee pain increases when going up and down stairs, when the patient squats and when walking on uneven ground. The articular crepitus is another hallmark that progresses as the disease progresses to advanced effusion stages, cysts and even instability of ligaments¹⁴.

Among the causes of knee osteoarthritis, it has been mentioned those raised by Scott and quoted by Mr. Yusniel Hechavarrria Llovet (2005)¹⁸ as the most important due to the following; obesity (constitutional theory), age (senile theory), heredity, "mechanical" injuries (traumatic theory), bone density (static theory). As said before, this condition follows a slowly progressive course, so it requires a treatment in which a holistic therapy is employed in addition to physiotherapy, spa therapy, and drug therapy, besides also applying massages and therapeutic exercises as fundamental elements in the process of comprehensive rehabilitation of the patient. The initial treatment in most of the cases is of drug types. However, surgery plays an important role as well¹⁴⁻¹⁷.

This pathological condition should be diagnosed clinically at early stages. The radiographic study is essential to know what type of treatment to offer the patient and its expectations, as well as providing specific care according to the degree of the disease and where it is located; which leads to the following:

The need for applying such studies opens the possibility of acquiring new knowledge about the disease in order to collect elements that facilitate early diagnosis on the eve of offering a better treatment, most successful management and prognosis and even influence the style and quality of life of patients. The benefit to be obtained with

the results of this research is to first of all, explore the establishment of the state of the art regarding the disease, designing epidemiological studies to guide strategies to promote preventive intervention that lead to slow the progress of the disease and prevent functional disabilities in the elderly.

CONCLUSION

The scarcity of scientific references regarding Gonarthrosis in preventing the disease, allows identifying this as an area of opportunity for the developing of new research; considering that the approach was not even detected in the references found regarding the prevention and early diagnosis of the disease especially in developing countries, hence, the proposal is to work on integrating aspects of prevention, diagnosis and early treatments for gonarthrosis.

There is evidence that shows that Gonarthrosis is a public health problem, which is a disease to be studied with greater interest and above all; making greater emphasis on early detection. As discussed before, there is high economic impact in primary care, which reveals that the Gonarthrosis is a problem of social interest and certainly a challenge for public health. It requires public health strategies to the problem of knee gonarthrosis "osteoarthritis" its associated factors and degrees of disability, strategies design according to the needs of the population as well as the maintenance and continuity of further research on the subject

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