

## **Osteoarthritis: Perspective of a Population Facing Barriers to Access Health Services in Guatemala**

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### **INTRODUCTION:**

Osteoarthritis (OA) is a prevalent and complex musculoskeletal degenerative disease. In the case of Guatemala, a country with ethnic, cultural, and linguistic diversity in critical migratory issues; this condition is one of the leading causes of permanent disability that affects the Guatemalan's quality of life, mainly due to the delay in diagnosis and treatment. In addition, in terms of access to health services, the western areas face unequally distributed physical and human resources, higher poverty rates, and low educational levels, which are assumed to be crucial non-biological risk factors for developing chronic diseases.

The objective of the study was to obtain an epidemiological, clinical, diagnostic, and therapeutic characterization with the purpose of knowing the population profile of OA in other areas of the country since there is a growing interest in evaluating preventive approaches and alternative therapies due to pathological differences in age, gender, and geographical region studied.

### **METHODS:**

A retrospective, descriptive study was carried out with primary data calculated from a total population of N=319 cases. A confidence level of 95% was used with values  $Z=1.96$ ,  $p=0.5$ ,  $q=0.5$ , and  $E=0.05$ , obtaining a sample of 175 individuals. However, 201 medical reports were evaluated by inclusion criteria to add greater representation.

Pre-and post-treatment joint evaluation data forms of patients 15 years of age and older with a follow-up time of more than two years who received intra-articular injection with platelet-rich plasma (PRP) were tabulated. The therapy was applied by an experienced medical specialist with full training in arthroscopy at the family medicine clinic of the National University of Guatemala, Quetzaltenango campus, Central America. Medical records from 2017 to 2021 were included and analyzed with the IBM SPSS software.

RESULTS: See table 1

### **DISCUSSION AND CONCLUSION:**

Inequality in access to health care represent a challenge in the patient's diagnostic and therapeutic process. There is a 1:2 male-to-female ratio for consultation due to pain and decreased mobility function, mainly from western regions of the country. Other participants from other geographical areas also consulted by the availability of PRP treatment as a therapeutic alternative for arthritic symptoms.

The main affected joint at consultation is the knee joint, and due to low financial resources, an increased search for new conservative treatment options as opposed to more costly arthroscopic and arthroplasty procedures. Due to low educational levels in the general population, there is a lack of knowledge of the effective prevention of risk factors, with more patients arriving with different stages of degenerative OA.

The primary diagnostic imaging method utilized were A/P and lateral x-rays in a standing position, analyzed with the Kellgren and Lawrence scale. Other imaging methods such as ultrasound and magnetic resonance imaging are known to be helpful, but they are more expensive.

In Guatemala, the Public National Health Care System does not cover the full spectrum of OA management, and the main treatment is steroidal and non-steroidal anti-inflammatory drugs. PRP therapies are incipient, developing locally, either institutionally or privately.

In addition, patients do not consult to receive adequate care since there is no specialized medical center of reference at the national level to promote preventive, screening, and follow-up measures. Patients' treatment follow-up depends on the ability of the patient to respond. However, non-biological risk factors such as low educational and poverty levels play a substantial barrier in modifying risk behaviors to prevent developing OA.

All the factors associated with cartilage degeneration are unknown in this population, but given OA's heterogeneity and complex pathophysiology, continued studies of other population subgroups are encouraged. The diagnostic clinical role is

essential for a comprehensive and individual approach to OA management, and the prognosis will depend on Mayan beliefs and access to health services.