

OSTEOARTHRITIS

O1 Use of Hyaluronic Acid Injections for Knee Osteoarthritis: An Arthritis Specialty Clinic experience

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OBJECTIVE: To describe the use of hyaluronic acid (HA) injections for knee osteoarthritis among patients seen in an arthritis specialty clinic.

METHODS: Chart review of patients given Hyaluronic acid (HA) injections from October 2005-October 2006 using 3 preparations of HA, in an arthritis specialty clinic was done. Cases were diagnosed using the ACR criteria for the classification of knee osteoarthritis. The following preparations of HA were used: Sodium hyaluronate (Hyruan), Sodium hyaluronate (Go-On) and Hylan G-F 20 (Synvisc).

RESULTS: Preliminary results pertain to twenty four cases of knee osteoarthritis given HA injections. Twenty two were females, mean age was 73.17 years (range 40-94), and mean body mass index (BMI) was 28.44kg/m². Sixty seven percent were hypertensive while 17% were diabetic.

Bilateral knees were involved in 79% of patients. The joints were swollen and tender in 71% and synovial effusion was present in 29%. Prior medications given were COX 2 inhibitors (62%), Tramadol and Paracetamol combination (11%), intra-articular steroids (21%) and/or Glucosamine (25%).

Sixteen patients received 5 doses of Sodium Hyaluronate with a mean decrease in pain Visual Analogue Score of 4.0 while 8 patients had 3 doses (including one patient given with Synvisc) of HA with a mean VAS decrease of 3.8 after the last dose of HA injection. There was no further improvement of VAS noted in 56% of patients two weeks and one month after the last dose of HA injection. Minimal improvement (VAS change of 1-2) was noted in 12.5% (2 patients) two weeks and one month after the fifth dose of HA. Recurrence of knee pain 2 months after intraarticular injection was noted in two patients given 5 doses of HA and in one patient who had three doses of HA.

Synovial effusion, recurrence of swelling and tenderness were demonstrated in 4 patients during the course of HA administration. Two were noted after the first dose and two after the third dose of HA injection. Of the 4 patients, one patient was admitted for increased knee swelling post HA injection. All were relieved by arthrocentesis and intraarticular steroid injection.

CONCLUSION: In this series, 24 patients with osteoarthritis given HA viscosupplementation showed improvement of pain, swelling and tenderness. One patient on her second cycle of Synvisc injection had adverse event after the last dose relieved with arthrocentesis and intraarticular steroids.

O2 Health-Related Quality of Life and Functional Status of Filipinos with Knee Osteoarthritis

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OBJECTIVE: The aim of this paper is to determine HRQoL of Filipinos with knee osteoarthritis particularly in the domains of pain, disability and global health status.

DESIGN: Cross-sectional study design

SETTING: Inpatient and outpatient services of Section of Rheumatology, Clinical Immunology, and Osteoporosis of the University of Santo Tomas Hospital between November 2004 to September 2005

PATIENTS/PARTICIPANTS: Adult males and females with knee osteoarthritis confirmed based on American College of Rheumatology criteria

MAIN OUTCOME MEASURES: Disability was measured using the Health Assessment Questionnaire (HAQ) Disability Index. Pain and global health status were measured by the HAQ Visual Analog Scale and HAQ Global health index.

RESULTS: Fifty-one patients (33 female, 18 male) were entered in the study. Mean disease duration was 23.61±44.25. The mean patients global scale, disability index and pain index were 1.26±0.69, 0.99±0.56 and 1.33±0.84 respectively. There was a significant correlation between disability index and pain severity (p=0.021) and disability index and global scale (p=0.008). The severity of the osteoarthritis was statistically associated with the pain severity index (p=0.029). Men have more severe disability, pain and poor health status.

CONCLUSION. Osteoarthritis has a significant impact on the quality of life. This resulted in significant disability, more pain and poor global health status. Men have more severe disability, pain and poor health status compared to women.

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O3 The Economic Burden of Osteoarthritis in the University of the Philippines-Philippine General Hospital Setting

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OBJECTIVE: The aim of this study is to quantify the direct and indirect medical costs of the care of uncomplicated osteoarthritis in the University of the Philippines-Philippine General Hospital.

METHODS: Review of charts of cases taken from the Osteoarthritis Study Group Database, interviews of actual patients, hospital construction costs and cost of laboratory tests and medicines provided data to generate a model on direct and indirect costs of treatment. Direct costs of treatment include drug and non-drug treatment modalities received by the patients and laboratory tests. Indirect costs include capital outlay, maintenance and operating expenses of the physical plant, wages lost and other costs like food and transportation expenses incurred.

RESULTS: Fifty-one consecutive osteoarthritis patients seen at the Arthritis Clinic of the Philippine General Hospital were interviewed. The OA Study Group Database showed an average of 60 new osteoarthritis cases each year. Indirect costs of treatment amounted to P 803,854.23 (US\$ 16,077.00), mainly from maintenance and operating expenses and capital outlay of the clinics. Direct costs amounted to P 647,016.00 (US\$12,940.00) largely (90%) spent on medicines. The annual cost of treating uncomplicated osteoarthritis in the Philippine General Hospital Arthritis Clinic is P1, 450,870.20 (US\$29,017) or P 28, 448.43 (US\$ 569.00) per patient. Not included among the computations are incremental costs attributable to disease progression.

CONCLUSION: The economic burden of osteoarthritis is substantial. Using the COPCORD prevalence rate of osteoarthritis in a Philippine urban setting of 4.1% and the Philippine population of 76.4 million as of 2001, the estimated osteoarthritis cases is 3.3 million. This translates to enormous expenditure for uncomplicated osteoarthritis in a country like the Philippines. Contributors to indirect costs as seen in other countries like, wages lost, are uniquely absent from our data. Most of the accompanying persons were not gainfully employed and were therefore able to accompany the patient to the doctor's clinic without loss of income.

O4 Validation of the Multidimensional Health Assessment Questionnaire in Measuring Quality of Life of Filipino Patients with Osteoarthritis

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1. **Poster Presentation at OARSI Congress. Sydney Australia. Sept 2002**
2. **Poster Presentation at APLAR Congress. Bangkok, Thailand. Dec 2002**
3. **Poster Presentation. 9th PRA Annual Convention. Edsa Shangri la Hotel, Manila. Jan 2002**

OBJECTIVES: This study aims to validate the Multidimensional Health Assessment Questionnaire (MDHAQ), in measuring the quality of life of Filipino patients with osteoarthritis.

METHODS: The MDHAQ was translated into Filipino by the Sentro ng Wikang Filipino of the University of the Philippines and back translated. Content validity and internal consistency of the Filipino translation was determined. The Filipino questionnaire was administered by a Rheumatology fellow-in-training to 79 cases of osteoarthritis. The patients were instructed to answer the questionnaire fully and to mark or to skip specific questions or activities which are not relevant to his daily activities. Note was taken if any of the items was inappropriate, difficult to answer, or not fully understood. Statistical analysis for Domain 1 (18 items) and Domain 2 (8 items) tested for internal consistency or homogeneity of scale using item-total correlation and Cronbach's alpha.

RESULTS: For Domain 1, 2 items, #13 (Drive a car 5 miles from your home) and # 14 (Participate in sports and games as you would like) had the most number of missing values (skipped/not answered by patients). By excluding items 13 and 14, internal consistency of the Domain 1 items improved with a scale-reliability coefficient of 83%.

All items of Domain 2 were answered. Item-correlation and Cronbach's alpha analysis showed a reliability coefficient of 78%.

The VAS for pain showed a mean of 4.1+/- 3.2 cm and that for fatigue was 5.2+/-3.5 cm.

CONCLUSION: A 24-item modified health assessment questionnaire for Filipino patients with osteoarthritis was generated in this study. Domain 1 has a reliability coefficient of 83% and Domain 2, 78%. This questionnaire will be utilized in quality of life studies to be undertaken

O5 Treatment of Osteoarthritis in the PGH Arthritis Clinic Before and After Publication of the 1995 American College of Rheumatology Guidelines

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1. Poster Presentation at APLAR Congress. Bangkok, Thailand. Dec 2002

2. Poster Presentation. 9th PRA Convention. Esda Shangri la Hotel, Manila. Jan 2002

OBJECTIVE: To compare the treatment of osteoarthritis (OA) before and after the publication of the 1995 American College of Rheumatology (ACR) treatment guidelines for OA of the hips, knees and hands.

METHODS: This is a retrospective study, including charts of patients who fulfilled the ACR clinical criteria for diagnosis of hips, knees and hands OA, seen at the Arthritis Clinic of UP-PGH in 1994 and 1999. Patients with secondary OA were excluded. For 1994, only 44 charts were retrieved out of a total of 111 charts (43%), while for 1999, only 62 charts out of a total of 132 charts were retrieved (47%).

Demographic data and management strategies were collected using a standard data collection form. Statistical differences were analyzed using the difference of two binomial proportions.

RESULTS: In the post guideline era, patient education increased ($p<0.05$) and use of oral NSAIDs ($p<0.05$) and topical analgesics ($p<0.05$) decreased. Paracetamol prescription did not change but more prescribed the opioid analgesic, tramadol, although the increment was not statistically significant. There was an increase in the use of intraarticular steroids ($p<0.05$) and drugs like glucosamine sulfate and ginger extract HMP33.

CONCLUSIONS: There was a change in the treatment practices of the physicians handling OA cases in UP-PGH. Whether these changes were due to the effect of the ACR treatment guidelines cannot be made conclusively at this point.

O6 The Efficacy and Safety of Oral Glucosamine Sulfate in the Treatment of Knee Osteoarthritis: a Systematic Review

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1. **Phil J Internal Medicine November-December 2000; 38(6): 311-317.**
2. **Poster Presentation. APLAR Congress. Beijing, China. May 2000**
3. **Presentation. 7th PRA Convention. January 2000**

OBJECTIVE: The purpose of this review is to evaluate the efficacy and safety of oral glucosamine sulfate at a dose of 1500mg/day compared to placebo and to ibuprofen (1200mg/day) in the treatment of knee osteoarthritis.

METHODS: A MEDLINE and manual search from 1966 to December 1998 was done using the key MeSH terms GLUCOSAMINE SULFATE and OSTEOARTHRITIS /GONARTHROSIS /OSTEOARTHROSIS. All randomized, controlled, blinded published studies specific for knee OA were included. All the included trials were subjected to critical review.

RESULTS: A total of 10 randomized, controlled trials (RCTs) were identified. Five RCTs were included in the analysis. Two studies compared oral glucosamine sulfate with placebo, where 276 patients were randomized with 261 completing the trials. The clinical outcomes used in the two studies differed and they could not be combined to obtain a summary odds ratio for drug efficacy. For both trials, however, there were more responders in patient treated with glucosamine sulfate. Three trials compared glucosamine sulfate with ibuprofen, where 417 patients were randomized and 395 patients completing the trials. Because of differences in the definition of clinical response, a summary odds ratio for drug efficacy was also not obtained. Significant effect of ibuprofen was observed as early as 1 week while peak activity of glucosamine sulfate was reached after second week of treatment. After four weeks, glucosamine sulfate was as ibuprofen. Adverse events due to glucosamine sulfate were generally mild and consist mostly of non-specific gastrointestinal complaints. There were 21 (61.14%) patients who developed adverse events while on glucosamine sulfate, 14 (10.29%) while on placebo, and 54 (25.84%) while on ibuprofen. Adverse events necessitating discontinuation was seen in 2 patients given glucosamine sulfate. Two patients on placebo and 16 patients on ibuprofen were withdrawn for drug-related adverse events.

CONCLUSION: There was a trend towards more efficacy of glucosamine sulfate over placebo and it is as effective as ibuprofen in the treatment of knee OA, with good safety and tolerability profile. However, considering the hypothesized mechanism of action of the drug, longer RCTs using generally accepted outcome measures would allow for a more meaningful evaluation of its efficacy in the treatment of osteoarthritis.

Key words: Osteoarthritis, Glucosamine sulfate, Review

O7 The Clinical Profile of Osteoarthritis among Filipino Patients Seen at the UP-PGH Medical Center

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BACKGROUND: Osteoarthritis is a worldwide disease and no population investigated so far has been spared.

OBJECTIVE: This study aims to describe the historical, clinical, laboratory, radiologic features and modes of therapy used among Filipino patients.

METHODS: Clinic charts of patients diagnosed to have "osteoarthritis" from January 1989 to December 1992 at the Arthritis Clinic of the UP-PGH Medical Center were reviewed. Only patients with primary osteoarthritis and those who fulfilled the American College of Rheumatology's (ACR) criteria for the diagnosis of hip, hand and knee osteoarthritis were included.

RESULTS: Out of 257 clinic charts reviewed, only 107 patients (42%) fulfilled the ACR criteria, while 7% had secondary osteoarthritis. Among those included in the study (n=107), the joints affected were: knees (80%), hands (15%), and hips (5%). Patients were generally more than 50 years old and had a female preponderance. Pain was generally mild and range of motion, structure and function were preserved for all

3 sties (80%). Laboratory values, although non-specific, were consistent with a non-inflammatory arthritides. Osteophytes were the most consistent radiographic finding and joint space narrowing was not a frequent finding. Patients responded well to analgesics (88%) and non-steroidal anti inflammatory agents (87%).

CONCLUSION: In this group of Filipino patients with osteoarthritis, the joints commonly affected were the knee joints. Most patients were females in the 5th decade of life, with generally mild symptoms, physical signs and radiographic findings. A good response to analgesics was observed.

O8 Chondroitin Sulfate in the Treatment of Knee Osteoarthritis: A Meta-Analysis of Randomized Controlled Trials

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1. *Poster Presentation. Osteoarthritis Research Society International Congress. Vienna, Austria. September 1999*
2. *Paper Presentation. 7th PRA Annual Convention. January 2000*

O9 Predictors of Disability among Patients with Knee Osteoarthritis at East Avenue Medical Center

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OBJECTIVES: This study aims to describe the level of disability of knee osteoarthritis (OA) among patients at East Avenue Medical Center (EAMC) using the Western Ontario and McMaster Universities (WOMAC) osteoarthritis index, identify possible risk factors of disability among patients with knee OA, and determine the association of the identified risk factors to the level of disability of knee OA.

DESIGN: Cross sectional analytic study

SETTING: East Avenue Medical Center, a tertiary hospital

PATIENTS/PARTICIPANTS: Convenience sampling of 85 adult subjects (based on prevalence of 4.1%) coming from the out patient department and private clinic of EAMC satisfied the American College of Rheumatology clinical criteria for knee osteoarthritis was done. Exclusion criteria include history of total knee replacement, presence of other rheumatologic condition and pregnancy.

MAIN OUTCOME MEASURE: Self reported disability was measured by the WOMAC OA index. Risk factors for disability that were studied for their association with the WOMAC index were age, sex, weight, height, BMI, education (in years), number of co-morbidities present, smoking status (pack years), duration of knee OA, pain and stiffness scores. Analyses of the data were performed using Statistical Package for the Social Sciences (SPSS) version 13.

RESULTS: The mean disability score was 674.1 (\pm 318.81). Disability was significantly correlated with weight ($r = 0.260$, $P = 0.016$), pain ($r = 0.574$, $P = 0.000$), and stiffness ($r = 0.616$, $P = 0.000$).

CONCLUSION: Self reported disability associated with knee OA in this population is strongly related to pain severity, weight and stiffness. Interventions focused on weight, pain, and stiffness reduction are logical approaches to address the burden of disability associated with knee osteoarthritis. The impact of these interventions can only be assessed formally in prospective studies.