was observed in relation to OA in both knees and hands. In hand OA on the contrary, the ORs were not associated with weight. The adjusted OR of highest versus lowest weight category was 1.40 (95%CI 0.89,2.21) in individuals without MetS (Figure), and 0.77 (0.39,1.51) in individuals with MetS. MetS on the other hand was associated with hand OA, adjusted for the weight categories; individuals with MetS had a higher OR for hand OA as compared to individuals without MetS (1.52 (95%CI 1.10,2.09)) (Figure).

Conclusion: This study suggests that in knee OA, whether or not in co-occurrence with hand OA, mechanical stress is the most important underlying mechanism, whereas in hand OA alone, systemic processes might contribute most.

353 LONG-TERM EFFECTIVENESS OF GLUCOSAMINE AND CHONDROITIN IN TREATING KNEE OSTEOARTHRITIS: AN ANALYSIS WITH MARGINAL STRUCTURAL MODELING

S. Yang , C.B. Eaton , T. McAlindon , K.L. Lapane , Virginia Commonwealth Univ., Richmond, VA, USA; 1Mem. Hosp. of Rhode Island, Pawtucket, RI, USA; 1Tufts Univ., Medford, MA, USA; 1Univ. of Massachusetts Med. Sch., Worcester, MA, USA

Purpose: In the United States, one third of patients with osteoarthritis (OA) take glucosamine and chondroitin for arthritis symptoms in the United States. Despite the prevalent use of these two supplements, evidence from randomized controlled trials regarding their efficacy is inconsistent. The purpose of this study was to estimate the long-term effectiveness of glucosamine and chondroitin in relieving knee symptoms and slowing disease progression among patients with knee OA.

Methods: Using data from the Osteoarthritis Initiative, we identified 1,579 participants who had radiographic knee OA and were not taking glucosamine or chondroitin at baseline. The 4-year follow-up data were analyzed. At each annual assessment, use of glucosamine with or without chondroitin for at least 4 days per week was considered exposed (GLU/CHON). Knee symptoms were measured with WOMAC Pain, Stiffness and Physical Function, and structural progression of OA was measured with joint space width in the medial compartment. Sociodemographic characteristics (time-invariant) and indices of disease severity (time-varying) were considered as potential confounders. To take into account that the indices of disease severity may be simultaneously confounders and intermediate variables, we used marginal structural modeling to estimate the long-term treatment effects. To determine the clinical relevance of our findings, we compared the estimates with minimal clinically important difference of the WOMAC subscales (i.e., 1.2, 0.5 and 4.1 for Pain, Stiffness and Function, respectively).

Results: During the 4-year study period, 280 (18%) participants initiated treatment, 148 (9%) used the treatment at one assessment, and 65 (4%) were persistent users at all assessments. After adjustment for potential confounders with marginal structural models, we found no statistically or clinically significant differences between persistent GLU/CHON users and never-users in WOMAC Pain: 0.83 (95% CI: −0.01 to 1.68); WOMAC Stiffness: 0.31 (95% CI: −0.10 to 0.72); WOMAC Function: 1.80 (95% CI: −0.79 to 4.39); or joint space width: 0.04 (95% CI: −0.32 to 0.23).

Conclusions: Long term use of glucosamine with or without chondroitin did not appear to relieve symptoms or modifying disease progression among radiographically confirmed OA patients. Our findings are consistent with the results from several long-term clinical trials and support the latest guidelines for OA treatment which recommend against using glucosamine and chondroitin. Future qualitative research is necessary to understand why patients choose to continue using supplements which lack efficacy.

354 EFFECTIVENESS OF INTERNET AND DVD DECISION AIDS FOR PATIENTS WITH HIP AND KNEE OSTEOARTHRITIS


Purpose: A recent meta-analysis showed that decision aids improve knowledge, reduce decisional conflict, and improve other decision-making outcomes in the context of chronic health conditions. However very little is known about the effectiveness of decision aids for patients with osteoarthritis (OA). This study examined the effects of internet and DVD format decision aids for patients with hip and knee OA.

Methods: This study involved n = 155 patients with physician diagnoses of hip and or knee OA from a general internal medicine clinic and an orthopedic clinic in the Duke University Healthcare System. Participants were randomized to view either the internet or DVD format of a decision aid for knee / hip OA (according to the most severely affected joint) from the Information Medical Decisions Foundation. The Decision Quality Index – Facts about OA scale DQI Facts; range of 0–100, with higher scores indicating more knowledge about OA and its treatment) and Decisional Conflict Scale (DCS; range of 0–100, with lower scores indicating less conflict about preferred OA treatment) were administered before and immediately after viewing the decision aid, as well as 30 days later. The Preparation for Decision Making Scale (PDM; range 0–100, with higher scores indicating greater helpfulness of the decision aid) was administered immediately after viewing the decision aid. We hypothesized that both decision aid formats would be associated with improvement in outcomes and that changes would be similar between the two formats. Generalized linear models fit with generalized estimating equations (GEE) were used to examine change in DQI Facts and DCS over time, both between decision aid groups and within the sample overall. Group differences in the PDM scale were estimated with a general linear model (GLM).

Results: 60.6% of participants were female, the mean age was 61.8 (SD = 11.7), 26% had twelve or fewer years of education, and the majority (82.6%) indicated the knee was their most severely affected joint. Participants spent an average of about 45 minutes. There was a significant increase in DQI: Facts scores over time (p < 0.001); scores increased from baseline (mean = 50.0, SD = 19.3) to immediate post-decision aid (mean = 66.5, SD = 19.9) but declined somewhat by 30-day follow-up (mean = 56.4, SD = 19.7). These changes were similar between internet and DVD decision aid groups (p = 0.46). There was also a significant decrease in DCS scores over time (p < 0.001); scores decreased from baseline (mean = 25.0, SD = 26.0) to immediate post-decision aid (mean = 4.7, SD = 11.9) and remained low at 30-day follow-up (mean = 6.3, SD = 17.0). These changes were similar between internet and DVD decision aid groups (p = 0.82). PDM scores were relatively high overall but were lower for the internet format (mean = 74.9, SD = 22.9) than the DVD format (mean = 85.2, SD = 13.7, p < 0.001).

Conclusions: Internet and DVD Decision aids are relatively brief and feasible to deliver in health care settings and are associated with meaningful improvements in decision-making outcomes for patients with hip and knee OA. Although there was some attenuation in knowledge over time, improvements in decisional conflict persisted. The internet and DVD formats yielded similar improvements in knowledge and decisional conflict, but the DVD version was rated as more helpful in decision making. Further study is needed regarding the best approaches and formats for incorporating decision aids for hip and knee OA into clinical care.

355 ASSOCIATION OF LARGE JOINT OSTEOARTHRITIS WITH ALL-CAUSE DEATH: THE JOHNSTON COUNTY OSTEOARTHRITIS PROJECT

R.J. Cleveland, T.A. Schwartz, J.B. Renner, J.M. Jordan, L.F. Callahan, Thurston Arthritis Res. Ctr., Univ. of North Carolina-Chapel Hill, Chapel Hill, NC, USA

Purpose: Only a limited number of studies have investigated mortality among persons with osteoarthritis (OA). Most of these investigations