

UMass Chan Medical School

eScholarship@UMassChan

UMass Center for Clinical and Translational
Science Research Retreat

2016 UMass Center for Clinical and
Translational Science Research Retreat

May 20th, 12:30 PM

Correlates of hyaluronic acid and corticosteroid injections among patients with radiographically confirmed osteoarthritis

Shao-Hsien Liu

University of Massachusetts Medical School

Et al.

Let us know how access to this document benefits you.

Follow this and additional works at: https://escholarship.umassmed.edu/cts_retreat



Part of the [Health Services Administration Commons](#), [Musculoskeletal Diseases Commons](#), [Orthopedics Commons](#), and the [Therapeutics Commons](#)

Repository Citation

Liu S, Dube CE, Driban JB, McAlindon TE, Eaton C, Lapane KL. (2016). Correlates of hyaluronic acid and corticosteroid injections among patients with radiographically confirmed osteoarthritis. UMass Center for Clinical and Translational Science Research Retreat. <https://doi.org/10.13028/smbz-km75>. Retrieved from https://escholarship.umassmed.edu/cts_retreat/2016/posters/54

Creative Commons License



This work is licensed under a [Creative Commons Attribution-NonCommercial-Share Alike 3.0 License](#).

This material is brought to you by eScholarship@UMassChan. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMassChan. For more information, please contact Lisa.Palmer@umassmed.edu.

Title: Correlates of hyaluronic acid and corticosteroid injections among patients with radiographically confirmed osteoarthritis

Authors: Shao-Hsien Liu, MPH¹; Catherine E. Dubé, EdD²; Jeffrey B. Driban, PhD³; Timothy E. McAlindon, MD, MPH³; Charles B. Eaton, MD, MS^{4,5}; Kate L. Lapane, PhD, MS²

Institutional affiliations:

¹Clinical and Population Health Research Program, Graduate School of Biomedical Sciences, University of Massachusetts Medical School, Worcester, MA

²Division of Epidemiology of Chronic Diseases and Vulnerable Populations, Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA;

³Division of Rheumatology, Tufts Medical Center, Boston, MA

^{4,5}Center for Primary Care and Prevention, Memorial Hospital of Rhode Island, Pawtucket, RI and Departments of Family Medicine and Epidemiology, Warren Alpert Medical School, School of Public Health, Brown University, Providence, RI

Abstract

Objective: Despite the rapid proliferation of hyaluronate (HA) and corticosteroid (CO) injections and clinical guidelines regarding their use in osteoarthritis (OA), information on the characteristics of people receiving them is scarce. We described use of injections among adults with radiographically confirmed knee OA and identified correlates of injection use.

Methods: We used publicly available data from Osteoarthritis Initiative and included participants with \geq one radiographically confirmed knee OA (Kellgren-Lawrence grade (K-L) >2) at baseline. We matched 415 participants reporting HA and/or CO during the 6 month before one of the first 7 annual follow-up assessments to 1,841 non-injection users by randomly selecting a study visit to match the distribution observed in the injection users. Multinomial logistic regression models identified correlates of injection use including sociodemographics and clinical/functional factors.

Results: Injections were common (16.9% -year 1, 13.7% -year 2, 16.6 % -year 3, 13.5% - year 4, 15.9% -year 5, 13.5 % -year 6 and 9.9% -year 7) with corticosteroid injections most common (68.4%). HA and CO were more commonly reported by those with higher income (e.g. adjusted Odds Ratio (aOR) HA $>$ \$50k versus $<$ \$25k: 3.63; (95% CI: 1.20-10.99)) and less common among blacks (aOR HA: 0.19; 95% CI: 0.06-0.55). Greater K-L grade (grade 4 versus 2) was associated with increased odds of HA (aOR: 4.79; 95% CI: 2.47-9.30), CO (aOR: 1.56; 95% CI: 1.04-2.34), or both (aOR: 4.94; 95% CI: 1.99-12.27).

Conclusion: Hyaluronic acid or corticosteroid injections are associated with higher socioeconomic positioning and indicators of greater disease severity.

Contact information:

Shao-Hsien Liu, MPH, Clinical and Population Health Research Program, Graduate School of Biomedical Sciences, University of Massachusetts Medical School, 368 Plantation Street, Worcester, MA 01605

e-mail: shaohsien.liu@umassmed.edu