Social Determinants of Health Increase Complications, ED Visits, and Costs of Hip Arthroscopy

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INTRODUCTION: The purpose of the present study was to investigate the impact of SDOH on postoperative outcomes and cost following hip arthroscopy.
METHODS: A retrospective cohort review was performed using the Mariner M157 database. All patients undergoing primary hip arthroscopy since Q4 2015 with a minimum one-year follow-up were identified using Current Procedural Terminology codes for hip arthroscopy and corresponding International Classification of Diseases-10 diagnosis codes for ipsilateral hip pathology. Patients with a history of prior or concomitant hip arthroplasty were excluded. Patients were divided into cohorts based on the presence or absence of current or prior history of SDOH. The SDOH cohort was comprised of four mutually exclusive categories: economic, social, educational, and environmental determinants. The SDOH and control cohorts were matched 1:1 by age, sex, obesity, and other medical comorbidities. Records were queried for 90-day major and minor postoperative complications, emergency department (ED) visits, postoperative costs, and one-year ipsilateral revision surgeries. Surgical costs and 90-day postoperative costs were determined using average insurance reimbursements. Bivariate analysis using chi-square and Fisher's exact tests and multivariate logistic regressions and adjusted linear regressions were employed to assess the impact of SDOH on postoperative outcomes and costs.
RESULTS: After matching, 5,854 patients with a SDOH diagnosis and 5,854 control patients were included. SDOH were associated with an increased likelihood of minor complications (adjusted odds ratio [AOR]: 1.56, 95% confidence interval [CI]: 1.20-2.04; p=0.001) and ED visits (AOR: 1.50, 95% CI: 1.31-1.72; p < 0.001) following hip arthroscopy (**Table 1**). Additionally, 90-day postoperative costs were significantly higher for patients with a SDOH (p<0.001).
DISCUSSION: The present study found that SDOH increase the likelihood of postoperative complications, ED visits, and 90-day costs following hip arthroscopy.
SIGNIFICANCE/CLINICAL RELEVANCE: Further investigation is needed to fully understand the reason behind these disparities, and targeted intervention should address the causes of these inequalities to provide optimal care for all patients.

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Table 1. Results of Multivariable Logistic Regression

	Adjusted ORs	95% CI	P Value
Any Complication (90-day)	1.53	1.21-1.95	<0.001*
Major Complication (90-day)	1.24	0.76-2.01	0.390
Minor Complication (90-day)	1.56	1.20-2.04	0.001*
Infection (90-day)	1.40	0.62-3.16	0.416
ED visit (90-day)	1.50	1.31-1.72	<0.001*
Ipsilateral Revision (1-year)	1.05	0.88-1.24	0.601

OR, Odds Ratio; *CI*, Confidence Interval; *ED*, Emergency Department.
Logistic regressions for each complication controlled for age, sex, and all identified comorbidities.
*Statistically Significant (P < 0.05).