Health Disparities in Patients With Musculoskeletal Injuries: Food Insecurity Represents a Common and Clinically Challenging Problem

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Purpose: Health disparities have important effects on orthopaedic patient populations. Socioeconomic factors and poor nutrition have been shown to be associated with increased risk of complications, such as infection, in patients undergoing orthopaedic surgery. Currently, there are limited published data on how food insecurity is associated with medical and surgical complications. This study sought to: (1) determine the proportion of food insecurity in orthopaedic trauma patients at a large Level I trauma center, (2) identify demographic and clinical factors associated with food insecurity, and (3) identify whether there are differences in the rate of complications and reoperation in patients who experience food insecurity compared to those who do not.

Methods: This was a retrospective chart review study of 100 patients aged 18 and older who were seen for initial evaluation or follow-up on fracture care between November 2022 and February 2023 at a single orthopaedic trauma surgeon's clinic in a Level I trauma center. Patients with nonoperative treatment of their fractures, non-fracture-related care, impending metastatic fracture care, and surgical management at an outside institution were excluded. Patient demographics, hospital admission data, and outcome data were collected from the electronic medical records. Cohorts were dichotomized by positive or negative screening on the validated Hunger Vital Sign questionnaire. Patients were propensity score matched for adjusted analysis.

Results: 37% of patients screened positive for food insecurity during the study period. Patients with food insecurity were found to have higher body mass index (32 kg/m2) than patients without (28 kg/m2) (P = 0.009). Additionally, patients who screened positive for food insecurity were more likely to be uninsured or have Medicaid (62% compared with 30%; P = 0.04). Food insecurity was associated with a higher percentage of superficial infections (13% compared with 0%; P = 0.047). There were no differences between groups in terms of the risk of reoperation, deep infection, and nonunion.

Conclusion: Food insecurity is common among patients who have experience orthopaedic trauma. The data suggest that food insecurity may be associated with an increased risk of superficial infections. Future research in this area should focus on further defining these health disparities and improving interventions that may address them.