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“Patient Characteristics Associated with Knee Osteoarthritis (OA) Symptom Severity at Initial Orthopedic Consultation”

Introduction:

The purpose of this study is to describe the characteristics of patients when initially diagnosed with knee OA by an orthopedist and the relationship between these characteristics and the clinical severity of knee OA.

Methods:

This was a retrospective chart review of patients diagnosed with knee OA during 2016-2017 by a single orthopedic surgeon practicing at a tertiary care university-based hospital. Knee problems were assessed using four subscales of the Knee Injury and Osteoarthritis Outcome Score (KOOS): Pain, other Symptoms, knee-related Quality of life (QOL), and function in daily living (ADL). Predictors of clinical OA severity (KOOS) at initial diagnosis included in multivariate analyses were sex, race, age, insurance type, Kellgren-Lawrence (KL) grade, Charlson Comorbidity Index (CCI), and body mass index (BMI).

Results:

Of the 559 patients included in the study, most were of black race (52.1%), female (71.7%), and had severe radiographic OA (KL grade = 4; 68.7%). Almost 4 in 10 were insured by Medicaid and 26% were morbidly obese. Female sex, black race, Medicaid insurance, younger age, and more severe radiographic knee OA were statistically significant ($p < 0.05$) risk factors for worse self-reported knee pain, other symptoms, ADL, and QOL at initial diagnosis of knee OA by an orthopedist.

Conclusion:

Most of the risk factors associated with clinical disease severity in the present study have also been identified as risk factors for worse OA progression. Thus, it may be possible to predict at initial orthopedic diagnosis which patients will be at a higher risk for faster progression of knee OA and a poorer response to treatment. This knowledge may help inform treatment planning as well as the development of risk-adjustment bundled payment models which should account for differences in the initial severity of OA and disease trajectory of individual surgeon's patient populations.