

BACKGROUND

Disparities in utilization of orthopaedic surgery based on race and ethnicity have been previously documented. We examine the impact of race/ethnicity on treatment recommendation by hand surgeon for carpal tunnel syndrome (CTS) of similar disease severity.

OBJECTIVES/HYPOTHESIS

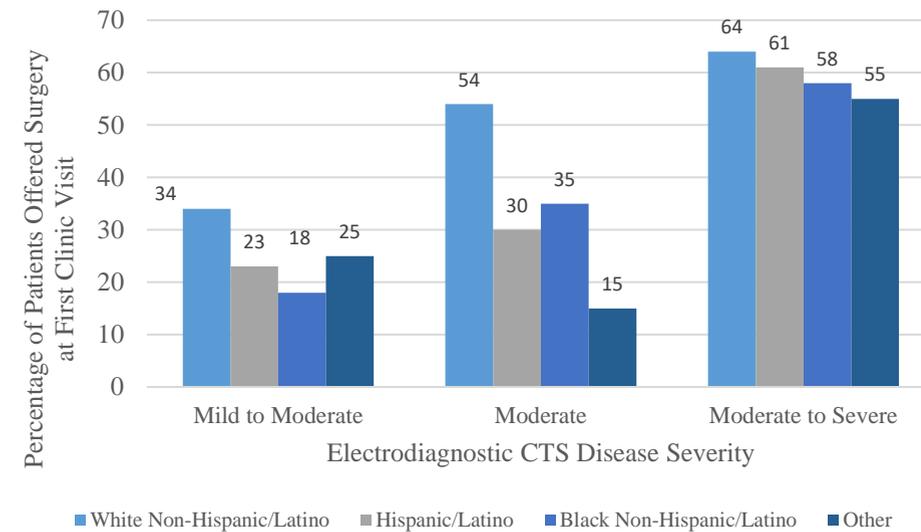
- **Primary Aim:**
 - To identify differences in surgeon indication for carpal tunnel release (CTR) with EMG-confirmed CTS as well as patient treatment choice, and characterize based on sex, race and socioeconomic demographics of patients.
- **Hypothesis:**
 - In patients with CTS of similar electrodiagnostic severity there is no relationship between patient race/ethnicity and treatment recommendation (operative versus nonoperative) by hand surgeon, patient decision to proceed with surgery or timing to surgery.

METHODS

- **Retrospective cohort study:**
 - Database: Hospital for Special Surgery
 - Age, gender, and electrodiagnostic disease severity was recorded for each patient.
 - Patient self-identified race/ethnicity was stratified into 4 categories:
 - White non-Hispanic
 - Hispanic
 - Black non-Hispanic
 - Other
- **Inclusion criteria:**
 - Patients aged 18-80
 - CTS diagnosis confirmed by hand surgeon and EMG
 - Patient visit between 2/1/16 to 10/4/20
- **Outcome measures**
 - Treatment recommendation (operative versus nonoperative)
 - Patient completing surgery following recommendation
 - Time interval between initial surgical recommendation and surgery

RESULTS

Figure 1. Surgical Recommendation for Electrodiagnostic Confirmed CTS Patients Stratified by Race/Ethnicity



RESULTS

- 949 patients meeting inclusion criteria are presented
 - Mean age was 58 years old (range 18-80)
 - 61 % female (n=574).
- **Cohort Race/ethnicity**
 - 70 % White non-Hispanic (n=667)
 - 11 % Hispanic (n=112)
 - 10 % Black non-Hispanic (n=93)
 - 9 % Other (n=83).
- **Electrodiagnostic Severity**
 - Mild to moderate in 37 % (n=348)
 - Moderate in 24 % (n=231)
 - Moderate to severe in 39 % (n=370)
- Surgeon recommendation for operative treatment was higher for older patients (p<0.01) and those with more severe electrodiagnostic severity (p<0.01)
- For all categories of EMG severity, **surgeons were more likely to recommend surgery to White non-Hispanic patients** than Black non-Hispanic and Latino/Hispanic patients (p<0.01).
- **White patients were more likely to undergo surgery (p<0.01)** than Black non-Hispanic and Latino/Hispanic patients.
- There was **no correlation between time to surgery and patient race/ethnicity.**

RESULTS

Table 1. Treatment Recommendation and Completion of Surgery Stratified by Race/Ethnicity

Characteristic		White Non-Hispanic	Black Non-Hispanic	Hispanic/Latino	Other	P-value
		N=667	N=93	N=106	N=83	
Treatment recommended	Conservative	330 (49.5%)	57 (61.3%)	68 (64.2%)	50 (60.2%)	<0.01
	Surgery	337 (50.5%)	36 (38.7%)	38 (35.8%)	33 (39.8%)	
Elected for surgery	No	197 (33.7%)	48 (57.1%)	44 (50.0%)	32 (43.8%)	<0.01
	Yes	387 (66.3%)	36 (42.9%)	44 (50.0%)	41 (56.2%)	
Surgery completed	No	174 (33.6%)	37 (54.4%)	32 (50.8%)	27 (43.5%)	<0.01
	Yes	344 (66.4%)	31 (45.6%)	31 (49.2%)	35 (56.5%)	
Time from clinic to surgery (days)	Mean (SD)	149 (221)	169 (151)	188 (209)	144 (208)	0.725

CONCLUSIONS

- Black non-Hispanic and Latino/Hispanic patients presented with higher severity CTS than White non-Hispanic patients
- Controlling for CTS severity, **surgeon recommendation** for operative management of CTS **correlated with older age and White non-Hispanic race**
- **Black non-Hispanic and Latino/Hispanic patients were less likely to undergo surgery** than White non-Hispanic patients following surgical recommendation
- For patients indicated for surgery and elected to complete CTR, there was no correlation between time to surgery and patient race/ethnicity

AUTHOR AFFILIATIONS

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