RESULTS: Among 366 patients, 191 received a 4D-CT and 175 made up the control group. There was no difference in age, sex, BMI, preoperative PTH or calcium levels, cure rates, and distribution of single adenoma and multigland disease between groups (Table). More 4D-CT patients had previous neck surgery compared to the control group (49/191 [25.7%] vs 8/175 [4.6%, respectively; p<0.001). Sixty-three percent of 4D-CT patients had nonlocalizing ultrasound and sestamibi vs 1.7% in controls (p<0.001).

4D-CT-localized adenomas were smaller (462 mm³ [interquartile range (IQR) 200-960] vs 762 mm³ [IQR 365-1,678]; p<0.0001) and more frequently ectopic (17.3% vs 6.9%, p=0.002). Among patients in the 4D-CT group with an ectopic gland (n=33), 16 (48%) were nonlocalizing on US and sestamibi and 11 (33%) were reoperative parathyroid operations. 4D-CT correlated with intraoperative findings in 87.4% (167/191). Inaccurate 4D-CT scans included 13 (6.8%) that were nonlocalizing, 8 (4.2%) that predicted adenoma in patients with multigland disease, and 2 (1%) that lateralized to the wrong side.

CONCLUSION: 4D-CT is highly accurate in localizing small and ectopic parathyroid glands, and is particularly useful in reoperative parathyroidectomy.

Are Patients with Limited English Proficiency Less Likely to Undergo Parathyroidectomy for Primary Hyperparathyroidism?
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INTRODUCTION: Despite meeting operative indications for primary hyperparathyroidism (PHPT), many patients never undergo parathyroidectomy. We hypothesized that patients with limited English proficiency (LEP) would be less likely to undergo parathyroidectomy than those who were English-proficient (EP).

METHODS: We queried our institutional database for patients with PHPT and either nephrolithiasis or who met operative criteria for asymptomatic PHPT between 2010 and 2018. Patients with end-stage renal disease or history of kidney transplant, secondary or tertiary hyperparathyroidism, or parathyroidectomy before the study period were excluded. The cohort was stratified by EP, defined by preferred language and interpreter use. Univariate associations of sociodemographic and clinical factors with parathyroidectomy were assessed. A multivariable logistic regression model was created to assess independent predictors of parathyroidectomy.

RESULTS: Among a cohort of 1,104 patients, 135 (12%) had LEP. EP patients were more likely to undergo parathyroidectomy compared to LEP patients (25% vs 14%, p=0.006). The LEP group was significantly older (mean age 69 vs 62 y, p<0.001), proportionally more often male (30% vs 20%, p=0.020), and more likely to have private insurance (39% vs 22%, p<0.001, Table 1). After adjusting for age, sex, preferred language, marital status, race, insurance, and Elixhauser comorbidities, patients with non-English and non-Spanish preferred language were less likely to undergo parathyroidectomy (OR 0.46, p=0.027, 95% CI 0.21-0.95).

CONCLUSION: We found that limited English proficiency is a significant contributor to lack of appropriate surgical management of PHPT. Surgeons should ensure that all patients are provided appropriate counseling and communication in their preferred language.