Comparing Symptom Burden and Quality of Life after Partial Thyroidectomy vs Total Thyroidectomy in Thyroid Cancer Patients
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INTRODUCTION: We compare patient-reported symptoms and quality of life (QOL) after a partial (PT) or total thyroidectomy (TT).

METHODS: A prospective analysis of 34 age/gender matched thyroidectomy patients between 2014-2019. Semi-structured interviews and validated QOL instruments: Short Form Survey Mental and Physical Health Cumulative Score (SF-12PCS, MCS), Thyroid Cancer (THYCA), European Organization for Research and Treatment of Cancer (EORTC), Eating Assessment Tool (EAT-10) and Voice Handicap Index (VHI) were completed preoperatively and postoperatively at 4 time points. Patients selected symptom cards and ranked degree of severity on a 3-point scale to generate a cumulative symptom score (CSS).

RESULTS: TT and PT had similar number of symptoms (12.2 vs 11, p = 0.60) and CSS 2 weeks after surgery (22.8 vs 21.5, p = 0.75), but both decreased faster for the PT group starting at 6 weeks. The PT group saw a significant decline in CSS at 6 months and 1 year (12.27 vs 3.82, p=0.01) that was not seen after TT (16 vs 13.31, p=0.54). The PT group demonstrated significantly better QOL than the TT group, as measured by the SF-12PCS, EORTC QLQ, and THYCA-QOL, but no difference was seen in the SF-12MCS. Abnormal VHI and EAT 10 scores were more common after TT, with a peak at 2 weeks.

CONCLUSION: Although symptom burden is similar after PT and TT at 2 weeks, PT patients significantly improved from 6 months, as evidenced in CSS and QOL measures. Larger studies need to explore patient-reported outcomes and their impact on treatment decision making.

Cost-Effectiveness of Computed Tomography Alone vs Computed Tomography with Adrenal Vein Sampling in Guiding Adrenalectomies for Unilateral Adrenaloma in Primary Aldosteronism
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INTRODUCTION: Adrenalectomies performed for primary aldosteronism due to unilateral adenoma are traditionally guided with CT imaging and adrenal vein sampling (AVS). However, the added benefit of CT with AVS, as opposed to CT alone, in achieving postoperative clinical success is disputed.

METHODS: Cost-effectiveness of adrenalectomy based on CT+AVS vs CT alone was calculated using a decision tree model. The tree was populated with values from the published literature. Patients underwent adrenalectomy and postoperative medical management, dosed based on disease persistence. Costs were represented by Medicare (FY2021) reimbursement rates (US$), and quality-adjusted life-years (QALYs) were calculated using published morbidity and survival data. A willingness-to-pay of $100,000 per QALY gained was set a priori. The primary outcome was the incremental cost-effectiveness ratio (ICER). One-way, 2-way, and probabilistic sensitivity analyses were performed to validate the model.

RESULTS: Care based on CT alone was the dominant strategy, with an average cost of $38,865.18 and effectiveness of 19.73 QALYs. CT+AVS-based care cost $1,604.57 more and yielded 0.27 fewer QALYs, resulting in a negative ICER of -$5,849.68. These results were upheld by sensitivity analyses, except when the probability of complete disease resolution based on CT alone dropped below 35.9%, or based on CT+AVS rose above 39.2%. In 100,000 random-sampling simulations, treatment with CT alone was favored 70.9% of the time.

CONCLUSION: For patients with primary aldosteronism receiving adrenalectomies with curative intent, the more cost-effective method is using CT alone. AVS would be preferred if efficacy of AVS-based surgery rose, or CT-based surgery fell.

Impact of Implementation of Operating Room-Based Parathyroid Hormone Testing Reduces Operative Time and Cost
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INTRODUCTION: In June 2019, an operating room-based intraoperative parathyroid hormone (IOPTH) machine was purchased. This study seeks to determine its impact on operative time, lab turnaround time (TAT), and costs compared to manual specimen delivery to the central laboratory.

METHODS: Patients who underwent parathyroidectomy from June 2017 to February 2020 were reviewed. Patient clinical and demographic data, operative time, and TAT were collected. Patients were analyzed by operation dates pre- or post-machine acquisition.