The primary cause of damage and fibrosis to the vocal fold mucosa is injury resulting from surgical resection of benign and malignant disease which often leads to dysphonia. There are a number of surgical and behavioral approaches to improving voice function in patients with persistent dysphonia following vocal fold mucosal resection, however, a current standard-of-care guideline does not exist. There are limited data on the relative efficacy of current treatments, creating a substantial knowledge gap.

To better understand current practice in this area, we evaluated utilization and predictors of treatment choice when selecting an initial voice treatment following vocal fold mucosal resection, using a nationally-representative Medicare sample.

MATERIALS AND METHODS

Patients who had undergone vocal fold mucosal resection (considered a proxy for vocal fold fibrosis) and were continuously enrolled in Medicare from 2004 to 2009 were identified in the Center for Medicare and Medicaid Services (CMS) National Chronic Condition Data Warehouse [CCW], a 5% random sample of US Medicare beneficiary claims.

The index procedure was defined as: i) partial laryngectomy involving the vocal fold mucosa; or ii) direct laryngoscopy with vocal fold stripping (coded alongside a vocal fold leukoplakia or cancer diagnosis).

The treatments of interest were: i) medication therapy, thyroplasty, or vocal fold injection, and ii) speech therapy.

We pursued an event-level analysis (Figure 1) to accommodate the possibility of multiple resections in individual patients and best capture every opportunity for post-index voice treatment.

Primary patient demographics included: age, sex, history of Medicaid eligibility (proxy for low SES), area of residence, duration of pre-index Medicare coverage, and distance to hospital.

The cumulative incidences of each initial treatment event were calculated and competing risks proportional hazards regression modeling was performed, using age, sex and Medicaid eligibility as predictors.

CONCLUSIONS

Our analysis suggests that the majority of Medicare patients who undergo surgical or behavioral voice treatment following vocal fold mucosal resection. Of those patients who do undergo treatment, most initially participate in speech therapy. Treatment utilization appears to vary as a function of patient sex, age and socioeconomic status: additional research is needed to determine whether these observations reflect clinically explainable differences or disparities in care, and to definitively characterize the factors that drive them.

Our findings may be augmented by complementary analyses using medical records review, prospective clinical studies, and the inclusion of patient-centered outcomes measurement.

REFERENCES

2. CCW; http://www.cwcdatal.org

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