Voice changes after thyroidectomy without recurrent laryngeal nerve injury.

- Sinagra DL,
- Montesinos MR,
- Tacchi VA,
- Moreno JC,
- Falco JE,
- Mezzadri NA,
- Debonis DL,
- Curutchet HP.

Division of Surgical Oncology, Hospital de Clinicas Jose de San Martin, University of Buenos Aires, Buenos Aires, Argentina.

BACKGROUND: Injury of the inferior laryngeal nerve is not the only cause of voice alteration after thyroidectomy; many patients notice minimal changes immediately after operation, without evidence of inferior laryngeal nerve damage. We hypothesized that there may be other causes for voice modification, such as injuries of the superior laryngeal nerve, prethyroid strap muscles, and cricothyroid muscles. We describe voice changes after total thyroidectomy, without inferior laryngeal nerve injury, using a computer program to objectively compare different patterns of voice. STUDY DESIGN: Forty-six consecutive patients who underwent total thyroidectomy were studied between March 1997 and December 1999. Acoustic voice analysis was performed preoperatively and at the second, fourth, and sixth postoperative months using a microphone adapted to a personal computer. Parameters measured were intensity of the voice (Shimmer) and fundamental frequency (Fo). RESULTS: No complications occurred during operation or in the postoperative period. Voice fatigue during phonation was the most common symptom after thyroidectomy. Forty patients (87%) stated that their voices had changed since the operation, and common complaints were voice alteration while speaking loudly, changes in voice pitch, and voice disorder while singing. Changes in the Fo and Shimmer values in smokers versus nonsmokers were similar (Fo overall, p = 0.56; Shimmer overall, p = 0.66), as were the same parameters in benign and malignant pathologies (Fo overall, p = 0.66; Shimmer overall, p = 0.67). CONCLUSIONS: Voice changes after uncomplicated thyroidectomy occur and can be objectively measured. This is important in the preoperative counseling of patients before thyroidectomy, for ethical and legal purposes.

PMID: 15454138 [PubMed - indexed for MEDLINE]