

갑상선 전절제술 후 방사선 요오드 치료 전 rhTSH (Thyrogen) 투여 여부에 따른 음성학적 비교

^{1,2}전북대학교 전북대병원 이비인후과, ³전북대학교 전북대병원 핵의학과

홍용태¹, 홍기환², 임석태³

Background

The larynx is an end-organ target for hormones, and thyroid hormone may act on the larynx. We objectively compared and analyzed the phonetic characteristics of patients who underwent total thyroidectomy before and after radioiodine therapy (RIT) according to administration of recombinant human TSH (rh-TSH.).

Methods

91 patients who had undergone a total thyroidectomy participated (50 patients without recombinant human TSH (rh-TSH), 41 patients with rh-TSH). Voice samples were obtained postoperatively (Post-OP), before high-dose RIT (Pre-RIT), and after high-dose RIT (Post-RIT). An acoustic analysis, maximum phonation time, and the voice handicap index (VHI) were used for the subjective evaluation.

Results

Pitch-related parameters (mFo, Fhi, and Flo) before

Pre-RIT decreased significantly after Post-RIT in patients with and without rh-TSH. Perturbation-related parameters (APQ, sAPQ, and vAm) before Pre-RIT increased significantly after Post-RIT in patients without rh-TSH, but not changed after Post-RIT in patients with rh-TSH. Maximum phonation time remained unchanged in patients with and without rh-TSH. The emotional index in the VHI decreased significantly in patients without rh-TSH, but not changed after Post-RIT in patients with rh-TSH.

Conclusion

Thyroid hormone receptors in the larynx in patients with hypothyroidism may affect phonation. Our results suggest that rh-TSH administration during RIT resulted in improving voice results during RIT.

Keywords

Thyroidectomy, Voice, Radioisotope therapy, Recombinant human TSH