Original Paper

ORL

ORL 2010;72:51–55
DOI: 10.1159/000298945

Received: August 12, 2009
Accepted after revision: September 29, 2009
Published online: March 24, 2010

Low-Temperature Bipolar Radiofrequency Ablation (Coblation) of the Tongue Base for Supine-Position-Associated Obstructive Sleep Apnea

Mehmet Ali Bababemez[a] Bulent Ciftci[b] Baran Acar[a] Muge Fethiye Yurekli[a]
Hayriye Karabulut[a] Aydin Yilmaz[b] Rıza Murat Karasen[a]

[a]Department of Otorhinolaryngology, Kecioren Training and Research Hospital, and
[b]Atatürk Chest Disease and Chest Surgery Training and Research Hospital, Sleep Lab, Ankara, Turkey

Key Words
Coblation · Supine-position-associated sleep apnea · Obstructive sleep apnea syndrome · Tongue base

Abstract
Objective: To assess the effectiveness of low-temperature bipolar radiofrequency ablation for Coblation of the tongue base in the multilevel management of supine-position-associated obstructive sleep apnea syndrome (OSAS). ***Study Design and Setting:*** A retrospective analysis of the data of 16 subjects undergoing uvulopalatopharyngoplasty and tongue base Coblation. The efficacy of the procedure was investigated on the basis of polysomnographic results. ***Results:*** The success rate was 62.5% in 16 patients who underwent surgery for OSAS, with decreases in the mean Apnea Hypopnea Index of 20.1–8.9. The success rate was separately evaluated according to the subjects' posture. A rate of 87.5% was found for the supine position, while the rate was 56.6% in non-supine positions. The minimum postoperative O_2 saturation was significantly increased for REM and non-REM stage 3 sleep rates. ***Conclusion:*** It is important to evaluate the relation of the disease to the body position in sleep apnea subjects. Coblation of the tongue base is an applicable method of therapy for patients who have sleep apnea that is more marked in the supine position.

Introduction

Obstructive sleep apnea is a disease that affects about 3% of the general population and can have fatal results when untreated [1]. Nasal continuous positive airway pressure (CPAP) is the gold standard and primary method of therapy in obstructive sleep apnea syndrome (OSAS). Compliance to CPAP therapy is lower when there is a decrease in disease severity [2]. Curative surgical treatment is particularly important for subjects in whom CPAP therapy cannot be applied. The tendency to collapse is increased in OSAS patients when lying in the supine position, as this diminishes the nasopharyngeal and oropharyngeal openings. The disease is position-dependent in more than half of subjects [3]. It is well known that posterior glossal narrowing is associated with supine-position-dependent OSAS [4].

KARGER

Fax +41 61 306 12 34
E-Mail karger@karger.ch
www.karger.com

0301–1569/10/0721–0051$26.00/0

Accessible online at:
www.karger.com/orl

Baran Acar, MD
Department of Otorhinolaryngology, Kecioren Training and Research Hospital
Pinarbasi mahallesi Sanatoryum caddesi Ardahan sok.no:1
TR–06310 Kecioren, Ankara (Turkey)
Tel. +90 312 356 90 00, Fax +90 312 356 90 22, E-Mail drbaranacar@gmail.com