INTRODUCTION

• Obstructive sleep apnea (OSA) is caused by soft tissue collapse at multiple levels of the aerodigestive tract.
• Surgical treatment that fails to treat all areas of collapse may fail; uvulopalatopharyngoplasty (UPPP), the most common surgical intervention for OSA, treats only the palate and does not address hypopharyngeal collapse.

METHODS

• Prior surgical patients with persistent OSA (apnea-hypopnea index, AHI > 10) following UPPP
• Pre-operative: polysomnography (PSG) within 6 months demonstrating elevated AHI and documented lowest oxygen desaturation (LSAT); examination with BMI and Epworth Sleepiness Scale (ESS)
• Three RFBOT treatments 3-7 weeks apart using Coblator® II Reflex Ultra 55 plasma wand initially in a 4 lesions diamond configuration (see Figure 1) which varied at subsequent visits within 1 cm of midline; post-treatment narcotics and antibiotics

RESULTS

• Six patients completed the prescribed protocol; two patients withdrew due to pain
• Average BMI increased from 31 to 32
• Average ESS improved from 13 to 12
• Average LSAT decreased from 85.5% to 82%
• No results reached statistical significance; there was no clear correlation between BMI and ESS improvement.

DISCUSSION

• OSA outcomes were mixed with an average worsening, but 50% individual improvement rate
• No relationship identified between changes in BMI and AHI
• Subjective patient improvement in symptoms, sleepiness
• Study limitations related to sample size
• Population dynamics (transient community)
• Changes in clinic operating procedures
• Pain tolerance counseling

CONCLUSIONS

• No definitive conclusions, but potential benefit demonstrating need for further research
• Small-scale pilot study with three BOT treatments using Coblator® proved safe and was associated with improvements in OSA in half of the patients
• Future research may include a larger study population, varied Coblation settings and altered total treatments sites and sessions
• Coblator® technique may also have a role in treatment of BOT during primary OSA surgery

CONTACT

Renee L. Makowski
Madigan Army Medical Center
Email: renee.makowski@us.army.mil
Phone: (253) 968-1420

Poster Design & Printing by Genigraphics® - 800.790.4001