The study of factors affecting the outcome of modified CAPSO in OSA patients in UKM Medical Centre

Abdullah Sani M, Nur Ajjrina AR, Khairul AK, Gan YF, Adibah H, Khadijah K

Department of Otorhinolaryngology-Head and Neck Surgery, Universiti Kebangsaan Malaysia, Kuala Lumpur Malaysia

ABSTRACT

Background and Aims: Modified CAPSO is an effective surgical technique in treating patients with obstructive sleep apnoea. The aim of this study is to evaluate the factors associated with the successful outcome of modified CAPSO, in particular body mass index (BMI), tonsil size, neck circumference and gender. **Methods:** A retrospective case study was performed by reviewing the medical records of 50 patients who had undergone modified CAPSO in UKMMC from January 2012 until December 2015. Each patient underwent a sleep study six months to one year after the operation to determine the apnoea-hypopnoea index (AHI). Success was defined as a reduction of 50% in the post-operative AHI. Chi-square test was used to analyse the data. **Results:** Fifty patients (40 males, 10 females) in this study were consists of 43 Malays, four Indians, one Chinese and two of other races. The mean values of pre- and post-operative AHI were 43.4 and 19.7 respectively. The overall success rate was 60%. The success rate amongst the obese was 40% compared to 62% in the non-obese patients and 58% in patients with large tonsils compared to 63% with small tonsils. Meanwhile, the success amongst patients with large neck circumference was 71% compared to 61% with small neck circumference and amongst male and female patients was 60% each. The p-values for BMI, tonsil size, neck circumference and gender were 0.336, 0.721, 0.514 and 1.000 respectively which were all statistically non-significant. **Conclusion:** Our study showed that there was no association between BMI, tonsil size, neck circumference and gender with the successful outcome of modified CAPSO. We therefore conclude that modified CAPSO can be offered to all categories of patients irrespective of their BMI, tonsil size, neck circumference and gender because they do not influence success of the operation.

Upper airway stimulation in obstructive sleep apnoea

Nur Hashima Abdul Rashid

Universiti Putra Malaysia, Selangor, Malaysia

ABSTRACT

Objective: Obstructive sleep apnoea (OSA) forms a significant part of the spectrum of sleep-related breathing disorders and is characterised by recurrent episodes of airflow obstruction caused by a total or partial collapse of the upper airway. The aim of this review is to describe upper airway stimulation (UAS) therapy, specifically hypoglossal nerve stimulation, and its role in the treatment of adult OSA. **Methods:** Review of the literature. **Results:** UAS therapy is the newest modality in treating OSA and is indicated in patients who do not tolerate, or unable to adhere to, the first-line treatment of positive airway pressure (PAP) therapy. It is differentiated from other surgical interventions by achieving a patent airway without altering the upper airway anatomy. The Stimulation Therapy for Apnoea Reduction (STAR) trial is a multicentre prospective study, which enrolled 126 participants who underwent surgical implantation of the hypoglossal nerve stimulation system and followed up by a 12-month assessment for effectiveness and adverse outcome. Included participants had moderate to severe OSA, body mass index <32kg/m^2 and absence of a complete circumferential pattern of palatal obstruction on drug- induced sleep endoscopy. Significant improvements were seen in objective and subjective measurements of the severity of OSA at a one-year follow-up period. These effects were maintained at 36-month post-surgery. **Conclusion:** UAS is an effective and successful long-term therapy for moderate to severe OSA in adult patients who do not tolerate PAP therapy.