MacKay and Holmes, J Sleep Disor: Treat Care 2015, 4:1
http://dx.doi.org/10.4172/2325-9639.1000147

Journal of Sleep Disorders: Treatment & Care

Commentary Article A SCITECHNOL JOURNAL

Heavy Issue: Clarifying AHI Elevation after Contemporary Airway Surgery for OSA – The MACHO Graph

Stuart MacKay[1*] and SueEllen Holmes[2]

Contemporary multi-level airway surgery for adult obstructive sleep apnoea (OSA) has been criticised on the grounds of disease recrudescence several years post-operatively. An increase in the AHI of patients who have undergone surgical intervention is viewed as an argument against effectiveness, regardless of improvements in quality of life and other outcomes. Patients who have undergone tailored airway surgery for OSA over a period of 7 years in my clinic have all been recommended 12 month and 36 month follow up in addition to immediate post-operative assessment (10 days and 30-42 days), as well as post-operative polysomnography (90-120 days). Those who returned for further evaluation after 12 and 36 months represented one of three categories: (1) asymptomatic and minimal weight change (2) asymptomatic and moderate or greater weight gain and (3) recurrent symptoms and weight gain. In my experience, 12 and 36 month symptom recurrence has been rare without weight gain (i.e. category (3) above).

Anecdotally, those in Categories 2 and 3 have tended to exhibit a greater incidence and rate of recrudescent disease. Weight gain is not always considered as the confounding factor in determining long term clinical improvement after OSA airway surgery. A comprehensive study investigating the independent longitudinal association between sleep disordered breathing and weight revealed a gain in weight of 10% increased AHI by 32% [1].

Perhaps a better perspective on the value of targeted multi-level airway surgery for sleep apnoea can be achieved by emphasising possible patient outcomes if the condition remains untreated and the patient gains weight (Figure 1). OSA is a potentially chronic progressive condition, as other authors have noted [2]. Such progression may be with or without weight gain, but weight gain is likely to correlate with a worse burden of polysomnographically proven disease.

Given the ongoing negative impact of OSA on cardiovascular health, metabolic function and general health and wellbeing, appraising the value of surgery should defer to baseline disease and unchecked progression in the event alternative treatments are ineffective or ostensibly withheld due to non-compliance, whereby the patient remains untreated.

***Corresponding author:** A/Prof Stuart MacKay MBBS, FRACS, Illawarra ENT Head and Neck Clinic, Suites 1 & 2, 8-10 Victoria Street, WOLLONGONG NSW 2500, Australia, Tel: 61 2 42261055; E-mail: Sgmackay@ozemail.com.au

Received: August 23, 2013 **Accepted:** October 13, 2013 **Published:** October 15, 2013

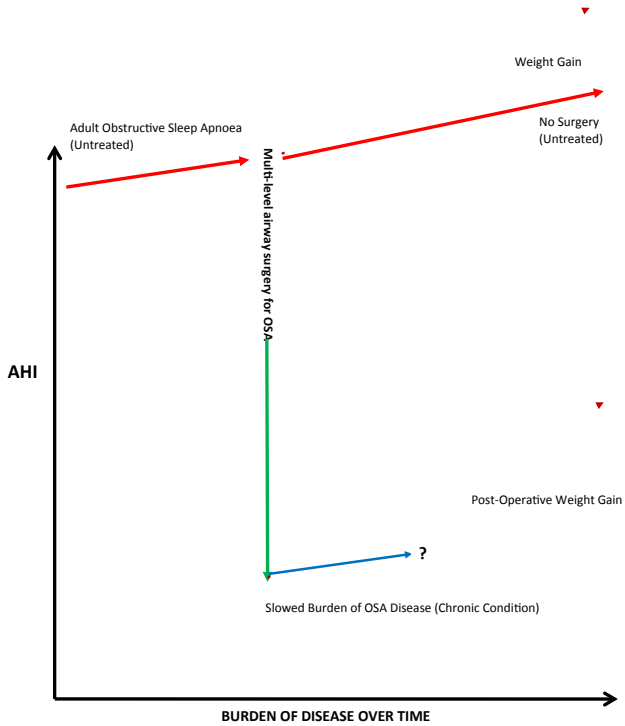

Figure 1: The MACHO graph (MacKay SG, Holmes SE, 2014): Progression of adult Obstructive Sleep Apnoea with and without surgery.

References

1. Peppard PE, Young T, Plata M, Dempsey J, Skatrud J (2000) Longitudinal study of moderate weight change and sleep disordered breathing. JAMA, 284: 3015-3021.
2. Weaver EM (2010) Judging sleep apnea surgery. Sleep Med Rev. 14: 283-285.

Author Affiliations

Top

[1,2]*Illawarra ENT Head and Neck Clinic, Australia*