



## CFAO GRADUATE STUDENT POSTERBOARD ABSTRACTS

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### **Aesthetic outcome of maxillomandibular advancement surgery for treatment of obstructive sleep apnea.**

J Curran\*, A Tassi, M Shimizu  
*Schulich School of Medicine and Dentistry  
University of Western Ontario, London, Ontario*

#### **Introduction:**

Obstructive sleep apnea (OSA) is a common sleep disorder in which complete or partial airway obstruction causes disruptive sleep and excessive daytime sleepiness. Researchers have reported highly successful surgical treatment for OSA utilizing maxillomandibular advancement (MMA) surgery. However, there are concerns amongst potential patients about the final aesthetic outcome and how they will appear after surgery.

#### **Objective:**

To evaluate facial aesthetic changes in patients treated for OSA with MMA surgery utilizing panels of oral and maxillofacial surgeons (OMFS) and laypeople (LP).

#### **Materials and Methods:**

This was a retrospective cohort analysis. Pre and post-treatment silhouettes of patients who underwent successful MMA surgery for OSA (n=22) were generated from patient photographs using Photoshop™ software. The silhouettes were shown in random order to a panel of judges consisting of OMFS (n=29) and LP (n=71). The panel of judges was asked to rate the patient silhouettes on a 10-point visual analog scale based on attractiveness, paying particular attention to facial balance.

#### **Results**

The post-surgical silhouette ratings were significantly higher (more attractive) than the pre-surgical ratings in 20 of the 22 MMA patients scored ( $P<0.05$ ) with an overall mean increase of 1.6 for all judges combined. There was a significant difference ( $P<0.05$ ) in the way that OMFS rated silhouettes as compared to LP for 8 of 22 patients, with OMFS attributing greater positive aesthetic change (2.1) than LP (1.4).

#### **Conclusions**

MMA surgery for the treatment of OSA does not have a negative impact on facial aesthetics. Both OMFS and LP feel that post-surgical aesthetic changes were positive, with OMFS observing a higher positive change than LP.