To determine the effect of a Multidisciplinary OSA Surgical Clinic on patient treatment outcomes.

Following surgical treatment, patients were asked to complete standardized preoperative overnight polysomnogram and, in certain cases, a comprehensive preoperative radiographic examination. All referred patients had sleep study-confirmed OSA with a mean preoperative AHI of 32.2. Surgery involving either single- or multiple-modalities was recommended in 70 (69%) patients, among whom 35 patients accepted and completed surgery. Surgery was not recommended in the remaining 31 (31%) patients (Table 2).

A total of 101 patients (74 males and 27 females) with an average age of 47.1 years and average BMI of 30.3 were assessed at the Multidisciplinary OSA Surgical Clinic.

The success rate reported in our study was comparable to that in the literature for bimaxillary advancement treatment, while it was higher for UPPP (but only 6/24 patients completed post-op polysomnogram).

The cure rate was comparable to that reported in the literature for both bimaxillary advancement and UPPP treatments.

Our study was limited by a large number of missing post-operative polysomnogram results and the true benefit of a multidisciplinary team approach in the management of OSA may be far greater than what is reported in our study.

Prospective or randomized controlled trials may be useful to delineate the true effect of a multidisciplinary OSA Surgical Clinic on patient outcomes in the future.

Effect of a Multidisciplinary Obstructive Sleep Apnea Surgical Clinic on Patient Outcomes

Chris J Hong, BHSc; Kevin J Butterfield, DDS, MD; Laurie McLean, MD

INTRODUCTION

• Obstructive Sleep Apnea (OSA) has been managed for decades with limited collaboration of the main disciplines involved in its diagnosis, treatment, and follow-up.
• There has been a growing recognition of the need for increased collaboration amongst healthcare professionals in the provision of OSA management.
• In 2009, the Ottawa Hospital established a Multidisciplinary OSA Surgical Clinic consisting of Otolaryngology-Head and Neck Surgery and Oral & Maxillofacial Surgery.

PURPOSE

• To determine the effect of a Multidisciplinary OSA Surgical Clinic on patient treatment decisions and outcomes.

METHODS

• A retrospective cohort study was conducted of patients diagnosed and managed for OSA at the Ottawa Hospital, a tertiary academic center, from January 2009 to April 2014.
• Following referral from a sleep medicine physician, all patients were examined at the Multidisciplinary OSA Surgical Clinic by a team consisting of Otolaryngology-Head and Neck Surgery (LM) and Oral & Maxillofacial Surgery (KB).
• All patients underwent a comprehensive assessment and treatment planning including nasopharyngoscopy, standardized preoperative overnight polysomnogram and, in certain cases, preoperative radiographic examination.
• Following surgical treatment, patients were asked to complete standardized postoperative overnight polysomnogram.

RESULTS

Table 1: Data Extraction Elements

General Patient Information

- Patient initials
- Sex
- Date of birth
- Age
- BMI
- Pulse
- BP (systolic/diastolic)
- Friedman tongue position (Mallampati)
- Tongue size
- Uvula bulk
- Skeletal occlusion
- Friedman staging
- Anterior rhinoscopy findings
- Diameter & distance
- Wall collapse

Patient Treatment Information

- Surgery recommended?
- Surgery done?
- Expected treatment/ provided treatment
- Post-operative sleep study done?
- Pre-operative AHI
- Post-operative AHI

Table 2: Bimaxillary Advancements vs. UPPPs

<table>
<thead>
<tr>
<th></th>
<th>N (%)</th>
<th>Pre-Op AHI Mean</th>
<th>Post-Op AHI Mean</th>
<th>% Improvement in AHI</th>
<th>% Success</th>
<th>% Cure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bimax Accepted</td>
<td>18/36</td>
<td>62.1</td>
<td>7</td>
<td>66.1</td>
<td>72</td>
<td>55.6</td>
</tr>
<tr>
<td>Bimax Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPPP Accepted</td>
<td>24/36</td>
<td>38</td>
<td>11.6</td>
<td>76.7</td>
<td>75</td>
<td>62.5</td>
</tr>
<tr>
<td>UPPP Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*only 6/24 UPPP patients had post-op PSG

Table 3: Comparison of Surgery vs. No Surgery Patients

<table>
<thead>
<tr>
<th></th>
<th>N (%)</th>
<th>% Surgery Recommended</th>
<th>% Surgery Accepted &amp; Completed</th>
<th>% Surgery Denied</th>
<th>% No Surgery Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>70/101</td>
<td>69%</td>
<td>51%</td>
<td>49%</td>
<td>31%</td>
</tr>
<tr>
<td>Age</td>
<td>45.7</td>
<td>51.1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>BMI</td>
<td>29.9</td>
<td>30.8</td>
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<tr>
<td>Pre-Op AHI Mean</td>
<td>34.4</td>
<td>36.1</td>
<td>32.3</td>
<td>26.7</td>
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</tr>
<tr>
<td>Post-Op AHI Mean</td>
<td>8.1</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

GENERAL CONCLUSIONS

• The success rate reported in our study was comparable to that in the literature for bimaxillary advancement treatment, while it was higher for UPPP (but only 6/24 patients completed post-op polysomnogram).
• The cure rate was comparable to that reported in the literature for both bimaxillary advancement and UPPP treatments.
• Our study was limited by a large number of missing post-operative polysomnogram results and the true benefit of a multidisciplinary team approach in the management of OSA may be far greater than what is reported in our study.
• Prospective or randomized controlled trials may be useful to delineate the true effect of a multidisciplinary OSA Surgical Clinic on patient outcomes in the future.

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