Recognition of the Anatomy of Airway Space as a Screening Tool for Obstructive Sleep Apnea

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Problem
Obstructive Sleep Apnea (OSA)
- Partial or complete upper airway obstruction
- Affects 15-24% of the population
- 70-80% undiagnosed

Objective
Investigate the plausibility of utilizing the Mallampati Airway Classification as a screening tool for OSA to aid in the screening and diagnosis of OSA/OSAS.

Materials & Methods
Age: ___ Gender: Male/Female
Weight: _______
Neck Circumference: _______

Patient Survey Questions
- Snore patterns
- Sleep patterns
- CPAP
- MAD or snore guard

Results
Surveys were coded, and entered into the SPSS for statistical analyses
N = 270 completed surveys (10 surveys were incomplete).
64 % Female, 36 % Male
Average Weight = 168.4 lbs.
Average Neck Circumference = 14.9 inches.

Previously Diagnosed OSA
- 34 Participants 12.6%

Not Previously Diagnosed OSA
- 236 Participants 87.4%
- 79.4% of the previously diagnosed patients had a Mallampati Class of III or IV.
- 20.6% of the previously diagnosed patients had a Mallampati Class of I or II (p < .05).
- Participants in Mallampati Class III and IV had statistically significant higher neck circumference (M = 15.37 SD = 1.88) and weight (M = 15.37 SD = 1.88) than participants with class I and II (p < .01).
- Ninety-seven (36%) participants in class III and IV reported snoring as compared to 39 (14%) who were in class II and II reporting snoring.
- Chi-square test of independence showed that snoring and class III and IV were dependent on each other, chi-square (2) = 16.78 (p < .01).

Conclusion
Mallampati Airway Classification and/or neck circumference may be a simple useful screening tool to identify potential OSA patients.

Mallampati Classification Distributions

<table>
<thead>
<tr>
<th>Class</th>
<th>Distribution</th>
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<tbody>
<tr>
<td>I - II</td>
<td>34 (12.6%)</td>
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<tr>
<td>III - IV</td>
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References