

## **Title**

G.A.S.P. – A Self-Administered Screening Questionnaire for Obstructive Sleep Apnea

## **Authors**

Gandis G. Mazeika, MD, Sleep Medicine Northwest (SMN), Seattle, WA

## **Introduction**

Obstructive Sleep Apnea (OSA) is well suited to screening by questionnaire. Several questionnaires for OSA exist, however their use has been limited by complexity. We now present the validation of a simple self-administered questionnaire for OSA. The G.A.S.P. questionnaire consists of five questions assessing the presence of: 1) snoring, 2) witnessed apnea, 3) fatigue or sleepiness, 4) hypertension or reflux and 5) being overweight. Questions can be answered “Yes”, “No” or “Not sure”. “Yes” and “Not sure” answers receive a score of 1. “No” answers receive a score of 0. Possible scores range from 0 to 5.

## **Methods**

99 subjects were recruited, partly from a shopping mall, partly from our clinic (SMN). Inclusion/exclusion criteria were: 18 and older, not pregnant, not hospitalized within 30 days, not previously diagnosed with OSA. 39 subjects were male, 60 female. Median age was 46. After consent, all subjects completed the G.A.S.P questionnaire followed by either home sleep recording (HSR) or polysomnography (PSG). PSG apnea/hypopnea index (AHI) values were corrected to HSR values by multiplying by sleep efficiency. The threshold for OSA was defined as an AHI of 5 or greater.

## **Results**

Raw data by score bracket (OSA+/Total): Score=0: 0/17; Score=1: 5/20; Score=2: 11/18; Score=3: 13/16; Score=4: 11/13, Score=5: 15/15. Receiver-operator area under the curve = 0.90. A threshold of 2 yielded specificity of 77% and sensitivity of 91%. A threshold of 3 yielded specificity of 89% and sensitivity of 71%. Mean AHI for scores of 3 or higher was 24.3 (95% CI = 18.0 – 30.6), and for scores of 2 or lower was 6.3 (3.9 – 8.6),  $p < .0001$ .

## **Conclusion**

The G.A.S.P. questionnaire is a simple tool well suited for screening for OSA in the primary care setting, with sensitivities and specificities equivalent to currently existing more complex instruments. Higher G.A.S.P. scores correlate with higher AHI values.