

Background: Snoring is the most common manifestation of Obstructive Sleep Apnea (OSA), characterized by episodes of upper airway obstruction during sleep. The gold standard examination for OSA is polysomnography (PSG). The Snoring, Tiredness, Observed apnea, high blood Pressure (STOP)-Body Mass Index (BMI), Age, Neck Circumference, and Gender (BANG) questionnaire is a screening tool to predict whether snoring patient had an OSA. The Apnea Hypopnea Index (AHI) is the number of apneas and hypopneas per hour. This index has been used to define the severity of sleep apnea syndrome.

Objective: To determine the correlation between STOP-BANG questionnaire score and AHI in snoring patient who underwent PSG at Saiful Anwar General Hospital Malang.

Patients and Methods/Material and Methods: This retrospective study was conducted in snoring patients who underwent PSG at Saiful Anwar General Hospital Malang from 2014 to 2016. The correlation between STOP-BANG questionnaire and AHI were analyzed using a Spearman's correlation.

Results: There were 32 patients involved in this study. The majority of patient is male (53.1%), STOP-BANG questionnaire with intermediate risk is 18 patients (56.3%), and moderate OSA are 12 patients (37.5%). There was significant correlation between STOP-BANG questionnaire and AHI ($p < 0.05$).

Conclusion: There was significant correlation between STOP-BANG questionnaire and AHI in snoring patients who underwent PSG at Saiful Anwar General Hospital Malang Indonesia.

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SHIFT 1 - SLEEP DISORDERS

Modulation of the thalamic structure according to sleep patterns

L.E. Betting^a, E. Facer-Childs^b, A.P. Bagshaw^b. ^aUNESP - Univ Estadual Paulista, Neurologia- Psicologia e Psiquiatria, Botucatu- SP, Brazil; ^bUniversity of Birmingham, School of Psychology, Birmingham, United Kingdom

Background: Sleep habits and circadian phenotype affect cognitive performance and may change brain conformation. The thalamus has a key participation in the sleep physiology.

Objective: To investigate if the thalamic structure changes according to sleep patterns.

Patients and Methods/Material and Methods: Two groups of extreme early and extreme late sleep patterns or circadian phenotype were recruited. Sleep patterns were accessed using diaries and wrist actigraphy. 3D T1-weighted images acquired with a 3-T MRI scanner were used for shape analysis and voxel-based morphometry (VBM) of the thalamus. For shape analysis, segmentations were extracted from Freesurfer, converted to meshes, submitted to spherical parameterization, aligned and sampled to triangular surfaces. For VBM, images were submitted to the unified segmentation approach with the DARTEL algorithm. For both analyses, comparisons of the right and left thalamus were done between early and late sleepers.

Results: Sixteen patients were included in the early group and 22 were in the late group. Abnormalities were observed in the late group. Shape analysis showed changes in the medial and posterior portion of the thalamus with a total affected area of 307 mm² for the left and 41 mm² for the right. VBM showed areas of gray matter atrophy localized in the left anterior ventral nucleus (2252 mm³) and in the right pulvinar (3859 mm³).

Conclusion: Thalamic structural differences may be associated with sleep patterns. This may help to shed light on the role of specific thalamic sub-regions in control of sleep patterns and circadian

phenotype, and sleep habits should be accessed in future studies to avoid a possible bias.

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SHIFT 1 - SLEEP DISORDERS

Neutral or positive mood are associated to non-restless legs syndrome (RLS) movements

K. Carlos, G. Prado. Escola Paulista de Medicina - Universidade Federal de São Paulo, Department of Neurology, São Paulo, Brazil

Background: RLS is a prevalent and distressing disease diagnosed upon patient's complaints. Although the International RLS study group provides strict criteria to improve an accurate diagnosis, people and non-specialized health professional still confuse RLS with some movements frequently found in people without RLS.

Objective: To describe which possible types of movement and mood are prevalent in people suspected of having RLS.

Patients and Methods/Material and Methods: Experimented sleep specialists that primarily see RLS patients listed the most frequent movements people without RLS reports while describing their suspected RLS. We attempted to classify those reported movements according to the moving joint, side and posture of the legs, and mood associated to movement.

Results: Sleep specialists reported 12 most frequent possible movements. We classified them according to the moving joint as foot based, knee based, hip based, and combined. Regarding the side, movements were unilateral or bilateral. Legs posture during movements were:

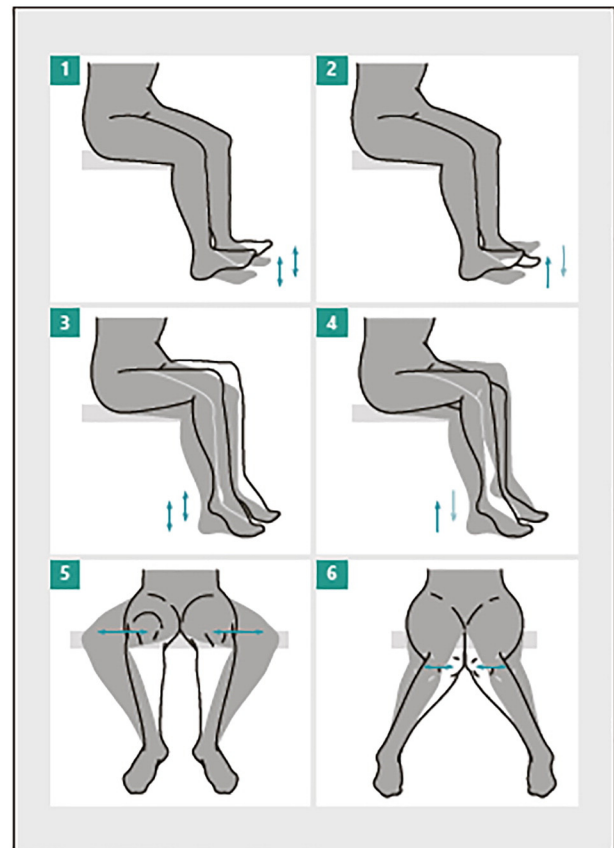


Figure 1.