

Upper Airway Resistance Syndrome (UARS) - Simple Snoring or Mild Obstructive Sleep Apnea

Pratibha Singhal

International classification of sleep disorders describes primary snoring as loud breathing sounds in sleep, without episodes of apnea or hypoventilation.¹ Snoring is sound produced by the vibrating structures of upper airway. The prevalence of snoring in the United States is between 30%-40%. In the Indian scenario prevalence of snoring in general population is 26%.² Snoring as presenting complaint in patients referred to a sleep clinic for overnight polysomnography can be as high as 98.88% as demonstrated in an interesting analysis by A. G. Ghoshal and his colleagues in this issue of the journal.³

The debate of health effects of snoring led to the description of Upper Airway resistance syndrome (UARS) by Guilleminault et al.⁴ UARS is used to describe tired and sleepy snorers whose polysomnography reveals non apneic (AHI < 10) sleep fragmentation (arousal index > 10). When suspected, history of snoring, risk factors (smoking, alcohol, muscle relaxants) should be elicited. Evaluation for a systemic disease like hypothyroidism, acromegaly should be carried out. Physical examination with BMI, hypertension and local abnormalities of upper airway should be carried out. Upper airway assessment may reveal small and crowded pharynx, large tongue, bulky uvula. Rajesh K Gupta and colleagues have described the clinical features of UARS in their article in this issue of journal. Patients can complain of daytime sleepiness, headaches, depression.⁵ Polysomnography is essential with transesophageal pressure monitoring for evaluating pressure changes. Ghoshal and colleagues observed an incidence of 2.6% of UARS in their patients undergoing polysomnography.³

Treatment options fall into 4 categories- lifestyle modification, surgery, oral appliances and CPAP. Lifestyle modification and correction of risk factors like weight loss, abstinence from alcohol and muscle relaxants should be first line of management. In the absence of risk factors, or if symptoms persist despite correction, noninvasive methods like oral appliances and CPAP should be tried. Positional training with sleeping in lateral position can be an option. Like Obstructive sleep apnea, surgical options range from nasal surgery, uvulopalatopharyngoplasty, laser assisted uvulopalatoplasty, radiofrequency ablation. Surgical results are however disappointing in the absence of clinically recognizable

upper airway pathology. Modafinil can be tried in patients with daytime sleepiness who tolerate CPAP poorly.

UARS represents an intermediate point between nonapneic, asymptomatic people at one end and tired sleepy snorers with sleep apnea at the other end of spectrum. The line between UARS and mild obstructive sleep apnea (AHI > 10) can be blurred occasionally.

Deciding whether asymptomatic snorers should be referred to a sleep specialist to undergo polysomnography can be difficult. However it is important to remember that many patients with sleep apnea underestimate their symptoms and many studies have demonstrated a high prevalence of unsuspected sleep apnea in snorers.⁶ With evidence that sleep disordered breathing represents a continuum of upper airway dysfunction during sleep and correlation of AHI and adverse health effects including hypertension and cardiovascular disease, UARS and sleep apnea should be identified and corrected early.

References

1. Diagnostic Classification Steering Committee: International Classification of Sleep Disorders: Diagnostic and Coding Manual. Rochester, Minn, American Sleep Disorders Association 1990,195.
2. Zarir F Udawadia, Amita V Doshi, Sharmila G Lonkar, et al. Prevalence of sleep apnea and sleep disordered breathing in middle-aged urban Indian men. *Am J Respir Crit Care Med* 2004;169:168-173.
3. AG Ghoshal, Supriya Sarkar, DJ Roy, et al: Polysomnographic Profile in a sleep Laboratory in Kolkata. *J Assoc Physician India* 2010;58:415-419.
4. Guilleminault C, Stoohs R, Clerk A, et al: A cause of excessive daytime sleepiness: The upper airway resistance syndrome. *Chest* 1993;104:781-787.
5. Rajesh Kr Gupta, Amol Chandra, Ajay Kr Verma, et al. Obstructive Sleep Apnea: A Clinical review. *J Assoc Physician India* 2010;58:437-440.
6. Shahar E, Whitney CW, Redline S, et al, for the Sleep Heart Health Study research Group. Sleep disordered breathing and cardiovascular disease: Cross sectional studies of the Sleep Heart Health Study. *Am J Respir Crit Care Med* 2001;163:19-25.

Consultant Chest Physician, Bronchoscopist and Sleepdisorder Specialist, Bombay Hospital, Mumbai.

DIABETES INDIA, JAMMU

Regional Update, Jammu

September 4th - 5th, 2010

Primarily for delegates from J&K, Punjab, Haryana, Himachal Pradesh & Western U.P.

Contact : Dr. Jitendra Singh, Chairman, Organising Committee

Professor & Head, Division of Diabetes & Endocrinology, P.G. Department of Medicine, Government Medical College, Jammu.

Phone: +91-9205440189, +91-191-2584291, 2435318 • e-mail: diabetesindia.update2010@gmail.com.