

SLEEP MEDICINE: A DESERTED FIELD IN PAKISTAN

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Sleep is an important and essential aspect of life and we spend about one third of our lives sleeping. Sleep disorders often manifest with insomnia and excessive daytime sleepiness. Large population based studies have shown that people who sleep longer and lesser have shorter life span^{1,2}. Other symptoms of the sleep disorders include snoring, abnormal motor behaviors etc.

There are several sleep disorders which alter sleep quantity and quality. Excluding insomnia, three important sleep disorders include REM behavior disorder (RBD), restless legs syndrome (RLS) and obstructive sleep apnea (OSA).

Insomnia is most common sleep symptom and disorder. Comorbid insomnia associated with mental disorders like depression and bipolar disorder, chronic medical ailments like asthma, gastroesophageal reflux disease, COPD and heart failure is common. Similarly primary insomnias like psychophysiological insomnia and other sleep disorders leading to insomnia like restless legs syndrome are also common. Identification of the underlying etiology and appropriate management is the key to successful treatment of insomnia. Sleep hygiene and cognitive behavioral therapy are of utmost importance in management of chronic insomnia.

RBD is a parasomnia characterized by dream enacting behavior which not only pose risk of injury to the patient and bed partner but has also been shown to be harbinger of neurodegenerative disorders e.g. synucleinopathies including Lewy body disease (LBD) and Parkinson's disease (PD)³. Diagnosis of this disorder is mainly clinical, confirmed on video-polysomnography. Mainstay of the symptomatic treatment is low dose of clonazepam. More important is identification of this order and close observation of the patients with RBD because this may not only help to recognize and treat PD early but also provide opportunities to identify PD and other synucleinopathies in subclinical phase, especially in research settings, to investigate neuroprotective

therapies for synucleinopathies including PD.

RLS is another important sleep disorder characterized by feeling of uneasiness, discomfort, indescribable feelings mainly in legs associated with desire to move or stretch the legs which are brought upon resting and are worse during evening and night time. This disorder leads to sleep onset insomnia and has strong association with Iron deficiency and pregnancy. The diagnosis is clinical and 80% of these patients have periodic limb movements of sleep on polysomnography. This disorder is common and affects about 10% of the general population and about 25% in pregnant women.^{4,5} The prevalence of this disorder in Pakistan is largely unknown, however, a few hospital based studies have shown that this disorder affects about 30% of pregnant women and 10% of general population.^{6,7} The disease does not only has negative effect on sleep and quality of life but there is also evidence that it may have cardiovascular consequences, especially hypertension.⁸

OSA is one of the most well studied sleep disorder characterized by snoring, nocturnal choking, excessive daytime sleepiness and fatigue. The disorder is common and population based studies from West has shown the incidence is rising.⁹ There is no published population based data on this disorder from Pakistan, however, a cross sectional survey has reported that about 10% people are at high risk for developing OSA, based in Berlin Questionnaire.¹⁰ This particular Questionnaire is validated in West but not in this population. The disease not only has direct consequences like disruption of sleep of room partner(s), poor sleep quality leading to excessive daytime sleepiness and fatigue, rise in risk of road traffic accidents, workplace catastrophes and poor efficiency but also increase risk of cardiovascular disorders. Large population based as well hospital based studies have shown that OSA, especially moderate to severe in intensity, increase risk of stroke, ischemic heart disease, hypertension and mortality.¹¹⁻¹² Stroke and ischemic heart diseases are common in

young age in Pakistan. Traditional risk factors like hypertension, diabetes mellitus, dyslipidemia and smoking are common risk factors in these patients but these patients are usually not screened for OSA, hence the disease may go unnoticed and underdiagnosed. Similarly, when patients visit any clinic or hospital, they are inquired about hypertension, diabetes mellitus, dyslipidemia and cardiac disorders but not screened for OSA symptoms.

Sleep service or sleep specialty is not well established in Pakistan and there is no formal training program of sleep disorders in Pakistan. Establishment of such programs will not only increase trained manpower but also increase research in the field and awareness about the disorders in young physicians. There is also lack of trained personnel to provide cognitive behavioral therapies for patients with insomnia.

Introduction to importance of sleep at school level, emphasis on healthy sleep behaviors, screening about sleep related symptoms in medical schools/colleges, awareness programs for public and general physicians, establishment of the training programs are required to improve sleep health and sleep research in Pakistan.

Public-private health industry partnership, multidisciplinary efforts and cooperation is needed to improve awareness, establishment of training programs and provision of quality care to the patients suffering from sleep disorders.

REFERENCES

1. Da Silva AA, de Mello RGB, Schaan CW, Fuchs FD, Redline S, Fuchs SC. Sleep duration and mortality in the elderly: a systemic review with meta-analysis. *BMJ Open*. 2016;6:e008119. doi: 10.1136/bmjopen-2015-008119.
2. Cai H, Shu XO, Xang YB et al. Sleep duration and mortality: a prospective study of 113,138 middle aged and elderly Chinese men and women. *Sleep* 2015;38:529-36.
3. Arnaldi D, Antelmi E, St. Louis EK, Postuma RB, Arnulf . Idiopathic REM behavior disorder and neurodegenerative risk: to tell or not to tell to the patient? How to minimize the risk? *Sleep Med Review* (In press)
4. Winkelman JW, Finn L, Young T. Prevalence and correlates of restless legs syndrome symptoms in the Wisconsin sleep cohort. *Sleep Medicine* 2006; 7:545-52.
5. Manconi M, Govoni V, Vita AD et al. Restless legs syndrome in pregnancy. *Neurology* 2004;63:065-9.
6. Mahmood K, Farhan R, Surani A, Surani AA, and Surani S. Restless legs syndrome among Pakistani population: A cross sectional survey. *Int Sch Res Notices*. 2015:762045. doi:10.1155/2015/762045.
7. Sikandar R, Khealani BA, Wasay M. Predictors of restless legs syndrome in pregnancy: a hospital based cross sectional survey from Pakistan. *Sleep Med* 2009;10:676-8.
8. Van Den Eeden SK, Albers KB, Davidson JE et al. Risk of cardiovascular disease associated with a restless leg syndrome diagnosis in a retrospective cohort study from Kaiser Permanente Northern California. *Sleep* 2005;1009-1015.
9. Peppard PE, Young T, Barnet JH, Palta M, Hagen EW, Mae Hla K. Increased prevalence of sleep disordered breathing in adults. *Am J Epidemiol* 2013;177:1006-14JH,
10. Taj F, Aly Z, Kassi M, Ahmed M. Identifying people at high risk for developing sleep apnea syndrome (SAS): a cross sectional study in a Pakistani population. *BMC Neurology* 2008,8:50 doi:10.1186/1471-2377-8-50.
11. Hla KM, Young T, Hagen EW et al. Coronary heart disease incidence in sleep disordered breathing: the Wisconsin sleep cohort study. *Sleep* 2015;38:677-84.
12. Young T, Finn L, Peppard E et al. Sleep disordered breathing and mortality: eighteen year follow up of the Wisconsin sleep cohort. *Sleep* 2008;31:1071-8.

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