



## Chronic craniofacial pain and sleep disorders: characteristics and management

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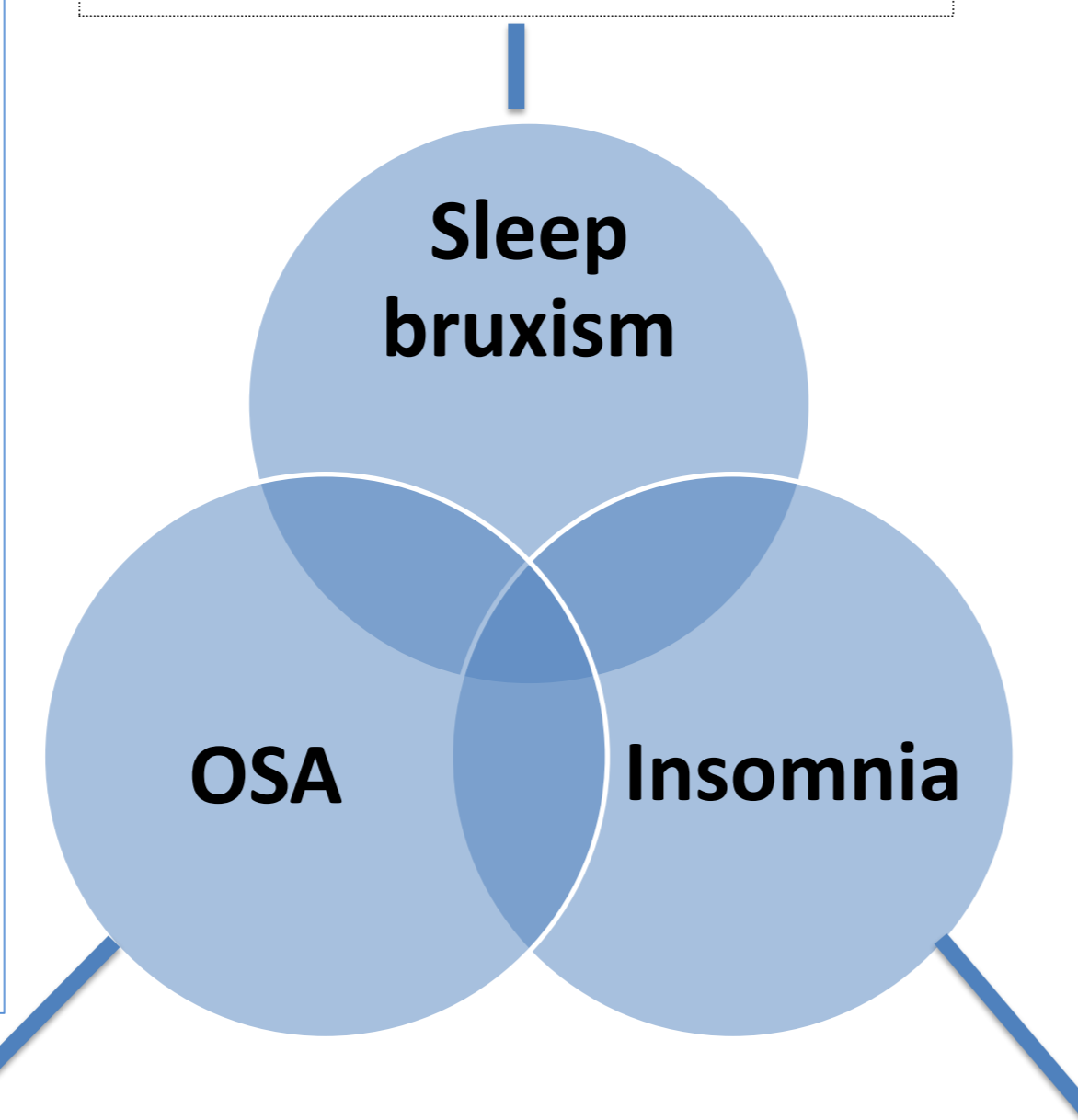
Over 39 million adult Americans suffer from chronic craniofacial pain. Chronic craniofacial pain involves the head, face and oral cavity and is associated with significant morbidity and high levels of health care utilization. Fifty to seventy percent of patients with chronic pain conditions report interference with sleep

**Methods:** Extensive review of the literature regarding the relationship between chronic craniofacial pain conditions and sleep disorders and consider management options.

**Results:** Experimental studies of acute and chronic pain in humans and animals have shown a bidirectional relationship between poor sleep and pain, and in particular, craniofacial pain and sleep are reciprocally related. The relationship between pain and sleep disorders will be discussed in the context of 4 diagnostic categories of chronic craniofacial pain: 1) Primary headaches: migraines, tension-type headache (TTH), trigeminal autonomic cephalalgias (TACs) and hypnic headache, 2) secondary headaches: sleep apnea headache, 3) Temporomandibular joint disorders (TMD) and 4) painful cranial neuropathies: trigeminal neuralgia, post-herpetic trigeminal neuropathy, painful post-traumatic trigeminal neuropathy and burning mouth syndrome.

### Sleep disorders related to pain

Sleep hygiene  
Behavioral changes  
Relaxation exercises  
Occlusal appliances



Screening for sleep disorders associated with craniofacial pain
Examining the of craniofacial pain pattern and history in relation to the sleep/wake cycle
Assess pre-sleep activities, sleep environment, lifestyle habits ,bedtime routine
Specific validated questionnaires to evaluate sleep complaints
Record reports of partners and in case of children of their parents
Assess secondary causes for sleep disorders such as a medical condition, psychiatric illness, stress, medication (including drug abuse), alcohol
Extra-oral examination should assess risk factors for OSA and for SRB
Intra-oral examination should assess risk factors for OSA and for SRB
Sleep and headache diaries should be kept for a few weeks
Further diagnostic investigations as needed (e.g. polysomnography, EEG, EMG, neuroimaging)

Craniofacial pain disorders	Mostly wakes from sleep
<b>Primary headaches</b>	
Migraine	✓
Tension-type headache	✓ X
Cluster headache	✓
Hypnic headache	✓
<b>Secondary headaches</b>	
Sleep apnea headache	✓
<b>Temporomandibular disorders (TMD)</b>	
Temporomandibular disorders (Myofascial and TMJ)	X
<b>Painful cranial neuropathies</b>	
Trigeminal neuralgia	X
Post-herpetic trigeminal neuropathy	X
Painful post-traumatic trigeminal neuropathy	X
Burning mouth syndrome (BMS)	X



### Education about the risk factors, natural history, and consequences

Weight loss  
Cessation of smoking  
Avoid alcohol before sleep  
Avoid sleep in the supine position  
Minimize the use of sleeping pills  
Treatment of lung diseases if any  
Treat nasal obstruction/allergies  
CPAP  
Mandibular advancement device (MAD)  
Orthodontic and surgical therapies to correct abnormal craniofacial abnormalities

### Behavioral interventions:

Sleep hygiene  
Stimulus control  
Relaxation therapy  
Sleep restriction therapy  
Cognitive therapy

### Cognitive behavioral therapy for insomnia

### Pharmacological approaches

Benzodiazepines, Non-benzodiazepines  
Melatonin agonists  
Antidepressants

### Combining behavioral and pharmacologic therapy

### Conclusion:

Clinicians and health authorities should be aware of the bidirectional relationship between poor sleep and pain, in general and regarding craniofacial pain in particular. Assessing sleep history and sleep quality and disturbances should be part of the routine diagnostic work-up for craniofacial pain patients