

Sleep Medicine

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SLEEP AND HEADACHE

The relationship between sleep and headache is a complex one. The possible associations are listed in the table.

Table 7: Headache and Sleep

| Time of onset | Type | Comments |
|-------------------|--|--|
| Only during sleep | Hypnic headache | Usually bilateral headache, waking the patient at approximately the same time each night |
| | Exploding head syndrome | Very brief, usually when falling asleep or during brief arousals. |
| Day and night | Migraine (common) Cluster headache Paroxysmal hemicrania (REM sleep clock headache) | Usually or exclusively unilateral headache. Associated with aura and autonomic symptoms (lacrimation, face flushing, nausea, vomiting) |
| On wakening | Obstructive sleep apnoea Bruxism Tension headache (psychogenic) Poorly controlled hypertension Depression Alcohol abuse | Specific history and/or physical findings should suggest the diagnosis. |

NB. More than one type of headache may be present.

Headache and obstructive sleep apnea

Often people are referred to the sleep unit for investigation of headache in the morning when the person wakes up. Although obstructive sleep apnoea can be associated with headache it is not a common symptom. More specifically headache in sleep apnea requires severe apnoea with CO₂ retention. The headache is related to hypercapnoea and tends to last only for about half on awakening. As the person starts ventilating

properly while awake the headache disappears. In a population-based study conducted by Les Olsen in the early nineties the frequency of headache is higher in the general population than in patients with sleep apnoea.

Alarm clock headache

An unusual form of headache is referred to as *hypnic headache* (or alarm clock headache). It is more commonly reported in the population above 50. The headache is usually bilateral contrary to what happens with cluster migraine and in paroxysmal hemicrania. There is no autonomic activation in hypnic headache (e.g. no lacrimation). Because it occurs at a particular time of night in each individual it is also referred as "alarm clock headache". It is more commonly in REM but also has been described in non-REM sleep. The investigation usually reveals no organic pathology. Treatment is difficult but response has been observed with Indomethacin 25mg at night. Melatonin 3mg at night has also been shown to be effective in some cases. Lithium 250-500mg also has shown to be effective. Interestingly the use of coffee just before going to bed, such as 100-150mg (1-2 cups of coffee), seems to also be effective.

Cluster headache and paroxysmal hemicrania.

There is an association between cluster headache, paroxysmal hemicrania and obstructive sleep apnoea even though there is no evidence of a causal relation..

Both conditions seem to respond to Indomethacin 25-50mg at night time. In the case of cluster headache Prednisone 25mg as well as Sumatriptan orally or by nasal spray appears to be effective.

Exploding head syndrome

This is an uncommon condition, which occurs at sleep onset. The patient describes a sensation from acute banging, lightening, electric shock to zapping which lasts for a few seconds. It tends to occur when the patient is falling asleep. It has been well studied and has shown not to be a form of epilepsy. It usually occurs in people who are under intense stress and apart from reassurance there is no need for further treatment.

Other reasons for headache can be related to tension headache, depression and alcohol abuse.