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Department of Neurology, Gentofte Hospital, Hellerup, Denmark

PIA WURTZEN NORUP

Sleeping disturbances and pharmacological/nonpharmacological interventions in old people

Age has an influence upon the normal sleep. Often the total sleep time decreases. The deep sleep (slow wave sleep) also decreases. Maybe this is due to the visual method we still use today for scoring of the sleep electroencephalogram. With increasing age the number of awakenings during sleep is augmented.

Many elderly people do not know about these physiologic changes of the sleep. Twenty five percent of persons over 65 years have sleep problems but only one fourth of these have discussed it with their doctor. The sleep problem in the elderly is mainly problems in maintaining sleep.

Persons with sleep problems consistently show more psychopathology than good sleepers. More than half of the patients have a psychological or psychiatric diagnosis. Depression or anxiety is most common and often these conditions are underdiagnosed. Regarded as a symptom the sleeping problem can be the reason that the patient calls his doctor. The interview of the patient is important, e.g. for excluding a depression.

Sleep changes
Total sleep time decreases
Slow wave sleep decreases
Several awakenings
Causes
Poor sleep hygiene
caffeine, nicotine
Conditioned insomnia
poor sleep habits
Psychological/psychiatric conditions
stress, depression, anxiety
Medicine & Alcohol
Medical diseases
nocturnal enuresis, pain, heart insufficiency, lung disorders, chronic diseases
Diurnal disturbances
bedriddance, dementia
Idiopathic insomnia (<5%)

The aim of the first interview of the patient is to find the cause of the sleep problem. In awaiting for many people stimulate themselves by drinking coffee and smoking – both

hinder sleep. Conditioned insomnia means that the insomnia can be trained due to unsuccessful events. The patient falls asleep on the sofa but going into the bedroom awakens him and prevents the sleep due to fear of not falling asleep.

Sometimes changing or cessation of drugs can cure the insomnia. Together with a sleep diary, a log of medicine and alcohol consumption can be necessary. Nocturnal enuresis, pain, heart and lung diseases are diagnosis that most often give insomnia. Disabled patients with chronic diseases can have sleeping problems due to serious diurnal disturbances.

It seems that sleeping problems are not a part of the normal ageing. Several papers show that insomnia is positively related to being woman, living alone (or unmarried), having an actual or future depression and being disabled. The sleeping problem is without relation to age or degree of dementia.

TREATMENT

When you should treat a patient, you may consider whether it is a transient or a chronic insomnia and you have to decide whether the patient should receive a pharmacological or a non-pharmacological treatment.

Transient/Short Term Insomnia
Stress-related
Serious information
Illness, examination
Working problems
Family events
Hospitalisation
Shift work
Jet lag

It is legal to choose the pharmacological treatment when treating the transient/short term insomnia (<2-3 weeks). Bedridden old persons or the patients with dementia can be treated with hypnotics for one, maximum two weeks to give them a regular circadian rhythm.

Rational Pharmacotherapy
Prescribe the lowest effective dose
Use intermittent dosing
No regular use beyond 2 weeks
Use drugs with short elimination $T_{1/2}$

Most of the hypnotics in Denmark are sold in packages of 100 each despite the official recommendation not to use it beyond two weeks. Hypnotics users older than 75 years of age often have used their hypnotic for more than 5 years! In Denmark still at least 50% or more of the hypnotics are the traditional benzodiazepines with a half-life of 24 hours or more. Hypnotics with a half-life lesser than 6 hours are recommended.

Side Effects
Decreases deep sleep (slow wave sleep)
Decreases REM sleep
Hangover:

Sedation
Reduced vigilance
Anterograde amnesia
Reduced short term memory
Headache
Nausea
Dizziness
Orthostatic hypotension
Depression
Exaltation

We often forget the side-effects of the hypnotics; we do not ask about them! In the elderly it is very important to ask about the side-effects because some of these can be mistaken for ageing or dementia. Dizziness and hypotension result in fall episodes and indirectly in fractures.

Non-Pharmacological Treatment
Correct differential diagnosis
Realistic expectations/knowledge
Good sleep habits
Behavioural therapy

In general, the patient with chronic sleeping problems should be offered a non- pharmacological treatment. This "treatment" includes a correct differential diagnosis to the insomnia, realistic expectations to the sleep (which require knowledge about the physiological changes of sleep) and good sleep habits and behavioural therapy.

Behavioural Therapy
Misattribution
Unrealistic expectations
Cognitive distortions

The behavioral therapy is dealing with three components: 1. Misattribution. Insomnia patients regard their sleep as pathological. The excessive focus on sleep can prevent its occurrence. It is necessary to sort out the daytime problems that might reasonably be attributed to poor sleep and the ones that need to be treated independently. 2. Many patients believe they need 8 hours of sleep. Specially for old people this can be wrong. 3. Most of us have a selective recall and are only remembering the bad nights. A sleep diary is a good help both for the patient and the doctor. It can be used also during the treatment.

Stimulus Control Therapy (Bootzin)
1. Go to bed and try to sleep only when you are sleepy
2. Do not use the bed for anything except sleep and sex
3. If you are unable to fall asleep, get up and go to another room
4. Repeat step 3 as often as necessary
5. Get up at the same time every day
6. No naps during the day

Bootzin's stimulus control therapy has been proven to be very effective. It is also used during cancelling of hypnotics.

In conclusion – it is important to think of sleep difficulties as serious problem and as a symptom of other conditions or disorders. The treatment is not just prescribing hypnotics.

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SUMMARY

Sleeping disturbance constitutes a major problem occurring in 25% of people aged over 65. Among the most frequent reasons of insomnia one can mention the overuse of coffee, alcohol, smoking, using some drugs, stress, depression, neurosis, dementia, chronic diseases. Idiopathic insomnia constitutes less than 5% of cases. Before the treatment of insomnia is started, its cause should be found and it should be determined if it is transient or chronic. The treatment of insomnia can be based on pharmacotherapy and non-pharmacotherapy methods. Behavioural therapy is mentioned among non-pharmacotherapeutic methods. It aims at changing the sleep-related habits. Pharmacotherapeutic treatment (still mostly based on benzodiazepines) should not last longer than 2–3 weeks and drugs of short elimination $T_{1/2}$ (below 6 hours) should be used. Side-effects of this group of drugs should always be taken into consideration. It should be remembered that sleep disturbances can be symptoms of other diseases and their treatment cannot consist in prescribing hypnotics only.

Zaburzenia snu u osób w podeszłym wieku – leczenie farmakologiczne i niefarmakologiczne

Zaburzenia snu to poważny problem, występujący u 25% osób powyżej 65 roku życia. Wśród najczęstszych przyczyn bezsenności możemy wymienić nadużywanie kawy, alkoholu, palenie, niektóre leki, stres, depresję, nerwicę, demencję, choroby przewlekłe. Bezsenność idiopatyczna stanowi mniej niż 5% przypadków. Podejmując leczenie bezsenności, należy ustalić jej przyczynę oraz określić, czy jest ona przejściowa, czy przewlekła. W leczeniu bezsenności stosuje się metody niefarmakologiczne i farmakologiczne. Wśród metod niefarmakologicznych wymienia się terapię behawioralną dotyczącą zmian nawyków związanych ze snem. Leczenie farmakologiczne (nadal najczęściej stosuje się preparaty benzodwuazepin) nie powinno trwać dłużej niż 2–3 tygodnie i stosowane powinny być preparaty o krótkim czasie półtrwania (poniżej 6 godzin). Trzeba zawsze mieć na uwadze efekty uboczne tej grupy leków. Należy pamiętać, że zaburzenia snu mogą być objawem innych schorzeń, a leczenie nie może polegać jedynie na przepisywaniu leków nasennych.