

Analysis and Nursing of Cerebrovascular Disease Patients with Insomnia

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Abstract: Objective: Investigate and analyze the insomnia type and insomnia causes of 152 patients with cerebrovascular disease, and explore effective measures for treating cerebrovascular disease patients with insomnia. Methods: PSQI, SAS, SDS, SCL-90 scale was used for evaluation. Results: Symptoms of insomnia include prolonged sleep latency, short sleep duration and sleep disorders; causes of insomnia include anxiety, depression, somatization factor, the environment and drug factors. Conclusion: Prevention of insomnia could not rely solely on the drug, the targeted measures based on the cause of the insomnia should be taken to improve the quality of patients' sleep.

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Key words: acute cerebrovascular disease; insomnia; nurse

1. Introduction

Insomnia is a very common problem (Sateia, 2004), especially in patients with acute cerebrovascular disease. Dysfunction of language and body movement which affects quality of life is easy to produce physical and psychological discomfort and lead to insomnia. Insomnia would result in mental disorders, increased physical symptoms and affect the rehabilitation process (McCarberg, 2003). Therefore, improving the sleep quality of patients with cerebrovascular disease is particularly important for the promotion of rehabilitation. Nursing also plays an important role in improving the patient's sleep (Maher, 2004; Nadolski, 2005). A series of effective measures were taken to help patients with insomnia as follows through investigation and analysis of 152 cases with cerebrovascular disease and insomnia admitted from February 2011 to February 2012.

2. Materials and methods

2.1 Subject:

The group of 152 cases, 86 cases of male and 66 cases of female, age ranging from 42 to 92 years old; 124 cases of cerebral infarction, 13 cases of cerebral hemorrhage, 15 cases of subarachnoid hemorrhage (SAH). No conscious obstacles, Diagnosis was confirmed by the head CT/MRI scan.

2.2 Methods:

2.2.1 Pittsburgh Sleep Quality Index (PSQI): The PSQI (Buysse et al., 1989) is a 9-question, 19 item self-report instrument designed to measure sleep quality and disturbance over a 1-month period (Carpenter & Andrykowski, 1998). PSQI questions 1-4 request specific respondent information that is filled in by hand, such as customary bed time and length of time to fall asleep. PSQI questions 5-8 are answered on a 0-3 scale with 0 indicating no symptom presence and 3 representing symptom presence 3 or more times the

past week. Question 9 is answered on a 0-3 scale with 0 meaning "very good" and 3 representing "very bad" (Carpenter & Andrykowski, 1998). All scores are combined according to the scoring criteria included with the form to produce a Global PSQI Score. Scores above 5 indicate clinically meaningfully disturbed or poor sleep (Holcomb, 2006).

2.2.2 SAS, SDS, SCL-90 scale assessment: Self-Rating Anxiety Scale (SAS), the standard score > 50 for clinical significance; Self-Rating Depression Scale (SDS), the standard score > 53 for meaningful; Symptom check list-90 (SCL-90) scale, standard score > 2 is meaningful. Two would be choosed according to the patient among the above three types of methods, 1 week after hospitalization.

3. Results

3.1 Types of insomnia and incidence: prolonged sleep latency, shortened sleep duration and sleep disorders. The PSQI Investigation results showed that: 94 cases, of prolonged sleep latency, the incidence rate is 61.8%; 58 cases of short sleep duration, the rate is 38.2%; 36 cases of sleep disorders, the rate is 23.7%.

3.2 Causes of insomnia: evaluation results according to SAS, SDS, SCL-90 scale, causing the causes of insomnia are: 106 cases of anxiety and depression, accounting for 69.7%; 69 cases of somatization factor, accounting for 45.4%; 32 cases of environmental factors, accounting for 21.1%; 22 cases of the influence of drugs, accounting for 14.5%.

4. Discussion

4.1 Anxiety and (or) depression: With the constant awareness of depression and anxiety disorders, patient population was expanding, insomnia is one of the important symptoms (Voyer, 2005). The data showed that most common causes of insomnia of patients with cerebrovascular disease is anxiety and depression, 106 cases of 152 cases in this group, the incidence rate of

69.7%. Due to fear of disease causing disabilities and burdening families, self-image changes by upper limb paralysis, aphasia, and other dysfunction would produce negative emotions such as anxiety, depression, pessimism, worry about their future, which can easily cause to sleep difficulties and sleep disorders.

4.2 Somatization factors: somatization disease can be accompanied by insomnia symptoms, such as heart disease, cancer, hypertension, tuberculosis, liver disease, frequent urination, and a variety of pain. There is insomnia at some stage of physical illness. or severe disease would affect sleep. With the improvement of disease, insomnia symptoms can be reduced. Cerebral infarction is a common brain disease, mostly on the basis of hypertention and atherosclerosis. Movement and sensory disturbances, headache, dizziness due to local tissue ischemia and hypoxia would affect normal sleep, ultimately lead to insomnia. In this group sleep of 69 patients were affected by somatization factors, and paraplegic patients who can not own changing position and need others to assist in the regular turning, often lead to sleep disruption. Sometimes the limbs pain, joint pain, will also produce an adverse impact on sleep. Some patients with cerebral hemorrhage and subarachnoid hemorrhage, were often difficult to sleep due to headache. Other incontinence, diabetes mellitus, prostatic hypertrophy, stimulation of nasal feeding tube and catheter, constipation and abdominal distension could cause sleep disruption.

4.3 Environmental factors: fail to adapt to the new environment, the sick room temperature and humidity, noise in ward can affect sleep quality.

4.4 The influence of drugs: 22 patients of the group relied on estazolam for a long time have produced varying degrees of drug resistance. After admitted to the hospital the doctor's orders to stop or reduce the dose would leave the patients to produce insomnia.

5. Nursing

Henderson, the U.S. nursing experts, pointed out that to meet the patient rest and sleep is a basic duty of care, In clinical work, nurses should take the overall care and an integrated approach to improve patients' quality of sleep based on the bio-psycho-social medical model (Krishnan, 2008; Wang, 2010; Gilsenan, 2012; Hedges, 2012).

5.1 Psychological care: insomnia in patients with cerebrovascular associated with depression and anxiety are closely related with the family, social, psychological, physiological and other factors. Nurses should take the initiative to give patients psychological support and help patients to rational treatment of diseases, and lift the ideological concerns of patients, to avoid irritation in spirit to give comfort to eliminate the patient's anxiety and pessimistic mood. Strengthen social support, to make patients understand that his friends

and family who are concerned about them is their strong backing. Nurses and family members should be caring patient, so that patients feel the warmth of the family. Family members could participate in the activities of the rehabilitation of patients so that self-confidence of patients will be enhanced and better treatment and care will be achieved in a relaxed and harmonious environment. If encountered psychological problem cannot be solved, care nurses should guide them to focus thinking half an hour after dinner, and then learn to short-term forgetting, temporarily remove the interference in the mind, to reduce the affect of insomnia by excessive ideological concerns.

5.2 Create a good sleep environment and conditions: the sick room should be quiet, suitable temperature and humidity, the bed is not too soft, so as not to turn over with difficulties. At the same time, providing the individual environment closed to the family, for the purpose of convenience and comfort of the patient's is very important (Test, 2011). Avoid the implementation of treatment and care operations in a limited sleep time, the operation of the care must be performed in the natural awakening of the patients, so as not to reduce the number of passive awakening.

5.3 Reduce the impact of paralytic disease on the body: turn over every 2 h, and pat the back side, put the involved limb in good limb position, the bed should be raised 15° ~ 30° for cerebral hemorrhage patients, help patients to remove or alleviate the discomfort caused by various diseases before going to bed.

5.4 Sleep hygiene education: guide patients to develop good sleep habits and establish more regular activities and rest periods. Urge patients formulate time activities every morning regardless of sleep state, increase physical activity during the daytime and minimize daytime sleep time in order to sleep good at night. Avoid exercise with excitability, smoking, the use of greasy food and alcoholic or caffeinated beverages and drugs before sleep. Recommend patients with a number of measures to promote sleep, such as drain urine 1h before going to bed, wash with warm water before going to sleep, and drink hot milk (Valtonen, 2005).

5.5 Light treatment: place light box than can be issued 2 500 lux (equivalent to 200 times the indoor light) 1 m in front of patients, 2 to 3 h, continuous lightening in the early morning or evening, to change the sleep-wake rhythm, forward or delay the the human biological clock. The mechanism of light therapy is to suppress melatonin secretion, it is mainly applied to the sleep rhythm disorders and elderly patients.

5.6 Cognitive behavioral therapy: cognitive behavioral therapy is for intractable insomnia patients able to get out of bed (Vance, 2011), which includes: ① go to bed when feeling sleepy; ② bed and bedroom only for sleep, can not read, watching TV or working in bed; ③ If can

not sleep in 15 to 20 minutes, you should get up and go to another room, only go back to bed when sleepy again(Li,2011); ④get up on time early in the morning regardless of how long night sleep is; ⑤do not doze off during the day in order to improve sleep efficiency. In addition, there are several effective methods,such as relaxation training, the ambitendency training (Espie, 2007).

5.7 Nursing efficacy and safety of drug :nurses need to be familiar with the treatment of cerebrovascular disease and the effect and adverse reactions of the sedative and hypnotic drugs.

5.8 The guidance of drug knowledge: nurses should introduce patients with details, the name of the medication, the therapeutic effect, time of reasonable daily medication, adverse reactions of drugs. Strengthen the publicity of the importance of prescribed medication, caution patients to not be secretly altered the medication time or change the dosage without medical advice, such as Meclofenoxate and citicoline drug.

5.9 The proper application of sedative hypnotic drugs: sedative and hypnotic drugs should be used for intractable insomnia or sleep interrupted, nurses should take the initiative to inform patients and their families to the principle of the use of sedative-hypnotics, such as the minimum dose, intermittent, short-term medication and pay attention to withdrawal rebound (Holmquist, 2005). Nurses should contact with the doctor in charge for sleep disorders of patients, so that the doctor choose the targeted sedative and hypnotic drugs based on the different types of sleep disorders and drug half-life.

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References:

1. Sateia MJ, Nowell PD. Insomnia. *Lancet*. 2004;364(9449):1959-73.
2. McCarberg B. Managing the comorbidities of postherpetic neuralgia. *J Am Acad.Nurse Pract*. 2003;15(12 Suppl):16-21; quiz 22-4.
3. Maher S. Sleep in the older adult. *Nurs Older People*. 2004;16(9):30-4.
4. Nadolski N. Getting a good night's sleep: diagnosing and treating insomnia.*Plast Surg Nurs*. 2005;25(4):167-73; quiz 174-5.
5. Holcomb SS. Recommendations for assessing insomnia. *Nurse Pract*. 2006;31(2):55-60.
6. Voyer P, Landreville P, Moisan J, Tousignant M, Prévile M. Insomnia,depression and anxiety disorders and their association with benzodiazepine drug use among the community-dwelling elderly: implications for mental health nursing.*Int J Psychiatr Nurs Res*. 2005;10(2):1093-116.
7. Krishnan P, Hawranik P. Diagnosis and management of geriatric insomnia: a guide for nurse practitioners. *J Am Acad Nurse Pract*. 2008;20(12):590-9.
8. Wang LC, Wang KY. [Insomnia: clinical evaluation and nursing management]. *Hu Li Za Zhi*. 2010;57(2):105-10.
9. Hedges C, Ruggiero JS. Treatment options for insomnia. *Nurse Pract*. 2012;37(1):14-9.
10. Gilsenan I. Nursing interventions to alleviate insomnia. *Nurs Older People*.2012;24(4):14-8.
11. Test T, Canfi A, Eyal A, Shoam-Vardi I, Sheiner EK. The influence of hearing impairment on sleep quality among workers exposed to harmful noise. *Sleep*. 2011;34(1):25-30.
12. Valtonen M, Niskanen L, Kangas AP, Koskinen T. Effect of melatonin-rich night-time milk on sleep and activity in elderly institutionalized subjects. *Nord J Psychiatry*. 2005;59(3):217-21.
13. Vance DE, Heaton K, Eaves Y, Fazeli PL. Sleep and cognition on everyday functioning in older adults: implications for nursing practice and research. *J Neurosci Nurs*. 2011;43(5):261-71; quiz 272-3.
14. Li SY, Wang TJ, Vivienne Wu SF, Liang SY, Tung HH. Efficacy of controlling night-time noise and activities to improve patients' sleep quality in a surgical intensive care unit. *J Clin Nurs*. 2011;20(3-4):396-407.
15. Espie CA, MacMahon KM, Kelly HL, Broomfield NM, Douglas NJ, Engleman HM,McKinstry B, Morin CM, Walker A, Wilson P. Randomized clinical effectiveness trial of nurse-administered small-group cognitive behavior therapy for persistent insomnia in general practice. *Sleep*. 2007;30(5):574-84.
16. Holmquist IB, Svensson B, Höglund P. Perceived anxiety, depression, and sleeping problems in relation to psychotropic drug use among elderly in assisted-living facilities. *Eur J Clin Pharmacol*. 2005;61(3):215-24.

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