Clinical Digest

Sleep Disorders

Risk Factors for Insomnia in Hospitalized Geriatric Patients

Insomnia often is indicated as a factor in falls and accidents among geriatric patients, who commonly experience daytime drowsiness as a result of sleep disturbances. During hospitalization, the prevalence of sleep deprivation seems to increase; however, there is a lack of studies in the literature evaluating this trend in patients admitted to geriatric or internal medicine units. Therefore, researchers from the University of Torino in Italy, assessed the prevalence, characteristics, and risk factors for sleep disorders in patients aged 65 years and older in a geriatric acute care unit.

The study, conducted between January 1, 2007, and June 31, 2007, included patients admitted to the geriatric acute care unit who reported experiencing sleep disturbances during the first 3 days of hospitalization. Of 218 patients, 80 (37%) were determined to have a sleep disorder, and 17 showed a new onset of insomnia. Twenty-eight (35%) had nonclinically significant insomnia, 22 (27%) had subclinical insomnia, 17 (22%) had moderate insomnia, and 13 (16%) had severe insomnia.

Researchers found self-assessment of poor health was associated with insomnia: 21% of patients with sleep disorders rated their health as poor vs 2% of patients without sleep disorders. Depression—attributed to the loss of a spouse, retirement, social isolation, comorbid disease, or onset of dementia—also was significantly related to insomnia. Patients with severe depression had a higher risk of developing sleep problems. Bedridden patients also had a statistically significant increase in sleep disorders, compared with patients with a preserved ambulatory status (88% vs 13%, respectively).

Of the 24 environmental factors that caused sleep disturbances, those ranking at the top of disturbance levels were noise from other patients, visitors, and staff; alarms; coughs; and flushing toilets.

Patients with sleep problems scored significantly worse on the cumulative index rating scale (CIRS) severity index, the numeric rating scale (which rated pain), and the activities of daily living scale. The CIRS severity index was the best predictor of insomnia related to hospitalization: Patients who scored worse on the CIRS severity index had nearly 8 times the risk of having insomnia, increasing for each CIRS severity index point. Their findings suggest that a greater number of lost functions associated with daily living is significantly associated with sleep disorders, the researchers say, noting that a functionally compromised geriatric patient has a lower ability to react to adverse environmental stress factors.

In community-dwelling older adults, vision and hearing problems are considered risk factors for insomnia because of the isolation the individual feels and the impact on circadian rhythms. In this study, however, visual or hearing impairment was protective against insomnia. The researchers postulate that this might be due to the staff's approach, which emphasized reducing daytime sleeping. Maintaining physiologic circadian rhythm allows for better sleep at night. Furthermore, patients with visual or hearing problems may be protected from disturbing factors during the night, such as noise and excessive light.

Source: *Arch Gerontol Geriatr.* 2011;52(3):133-137. doi:10.1016/j.archger.2010.03.0001.

Women's Health

Hydrothermal Ablation Means Fewer Hysterectomies

In the 1990s, endometrial ablative techniques and the Mirena (Schering Healthcare Ltd, Burgess Hill, United Kingdom) intrauterine system were introduced in the United Kingdom and, in 10 years, more than halved the hysterectomy rate—from 24,355 cases in 1993 to 10,559 in 2002.

The first-generation technique, transcervical resection of the endometrium, was promising in terms of patient satisfaction, but required significant operator skills, endometrial preparation, and a "steep learning curve," say researchers from Benenden Hospital in the United Kingdom. The second generation of ablative techniques, including the HydroThermAblator (HTA; Boston Scientific Limited, Natick, MA), was easier to learn and perform. To determine long-term patient satisfaction with the HTA technique, researchers reviewed 376 case notes of patients who had undergone HTA at their hospital from 1998 through 2006. They also mailed a questionnaire to patients, which included a postoperative menorrhagia questionnaire and quality of life (QOL) scores.

The mean age of the participants was 43 years. All of the women in the study underwent a physical examination, transvaginal scan, and full blood cell count prior to undergoing HTA. In total, 190 patients (77%)

felt "much better" after the HTA. The amenorrhea rate was 38%; a further 37% reported a substantial decrease in blood loss. After a mean follow-up of 45 months, 77% of patients did not need any further treatment, and 200 (80%) would recommend this procedure to a friend.

The researchers found that the risk of intraoperative and postoperative complications related to HTA was very low, with no cases of uterine perforation or unsuccessful cervical dilatation. Three burns (0.8%) to the vagina occurred. The most frequent postoperative complication reported by patients was urinary tract infection requiring antibiotics (10%), though this was self-reported and not confirmed with positive urine cultures.

An important finding, the researchers conclude, is that the follow-up data showed stability of clinical response with no decline in efficacy over 8 years of follow-up. They found no increased rate of operative or other treatment procedures in patients over 6 to 8 years (though they acknowledge that only 66% of the questionnaires were returned, which may have created bias in the results). However, for the year 1998, where the rate of questionnaire return was 90%, the satisfaction rate was as high as reported for other years and even higher for some parameters, though the total number of procedures during that time was relatively small.

Their results suggest that, for women aged 45 years and older, there is a good chance of success with HTA alone. In all, 29 women (11%) underwent subsequent hysterectomy for persistent menorrhagia or dysmenorrhea. Younger women had a significantly higher chance of having a subsequent hysterectomy: Only 6% of women aged > 45 years went on to have a hysterectomy, compared with 16% of women aged < 45 years.

Source: *Am J Obstet Gynecol.* 2011;204(3):207.e1-207.e8. doi:10.1016/j.ajog.2010.10.908.

CARDIOVASCULAR DISEASE

Using Renal Disease to Predict Cardiovascular Risk

Renal disease is a well-established risk factor for cardiovascular disease, but it may not be a good risk predictor. A large study conducted by researchers from Canada and Germany found that, when it comes to predicting cardiovascular events, low estimated glomerular filtration rate (eGFR) and high urinary albumin–creatinine ratio (UACR) are strongly associated with cardiovascular outcomes, but add little clinically useful information for risk stratification beyond that of traditional cardiovascular risk factors.

The study analyzed 27,620 patients over the age of 55 years who were enrolled in ONTARGET (ONgoing Telmisartan Alone and in combination with Ramipril Global Endpoint Trial) and TRANSCEND (Telmisartan Randomized Assessment Study in Angiotensin-Converting-Enzyme-Inhibitor Intolerant Subjects with Cardiovascular Disease). All patients had documented vascular disease or diabetes with symptoms of diabetic end-organ damage, and were considered to be at high risk for vascular events. Patients were followed for a mean of 4.6 years; 99.8% were followed until study end or until a primary event occurred, including death in 11.9%.

The hazard of the primary cardiovascular outcome—composite of cardiovascular death, myocardial infarction, stroke, or hospitalization for heart failure—increased with decreasing eGFRs and increasing UACRs. Even a modestly reduced eGFR (45 mL/min per 1.73 m^2 to 60 mL/min per 1.73 m^2), alone or in combination with a high UACR, was a risk factor.

Because of the wide variation at baseline, the researchers say, they could analyze risks over a range of UACRs. The risk for cardiovascular outcomes increased sharply to hazard ratios (HRs) of 2 in the high UACR range, with a gradual increase in HR to approximately 3 at the nephrotic threshold. eGFR values also varied widely; below an inflection point of 60 mL/min per 1.73 m^2, cardiovascular risk increased sharply to HRs of approximately 2 at an eGFR of 30 mL/min per 1.73 m^2.

Despite the strong association of eGFR and UACR with cardiovascular outcomes, adding them to a model that incorporated traditional risk factors did not significantly help with risk stratification, except in the highest-risk group. Adding renal information to the complete cardiovascular information slightly increased the proportion of patients assigned to the intermediate-risk category (from 31% to 32%).

Adding renal information to the risk stratification model for predicting long-term dialysis did make a difference, however. A model based on traditional cardiovascular risk factors classified only 67 patients as high risk, of whom, 1 required long-term dialysis. By contrast, the model that incorporated eGFR and UACR classified 560 patients as high risk, of whom, 48 required long-term dialysis.

Source: *Ann Intern Med.* 2011;154(5):310-318.

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