Sleep Disturbance in Older Adults With Cancer

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# Faculty Disclosure

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Greetings from the Canadian Prairies and the University of Alberta
A good sleep...
Quiz: True or False

- Adults who are 65 year and older need less sleep than adults who are 18-64.
- People who sleep less than 4 hours of sleep per night are 36% more likely to die from heart complications compared to those who sleep between 6 and 8 hours per night.
- Regularly sleeping more than 8 hours per night could be a sign of health problems.
- Women need more sleep than men.
Overview

• Explore the relationship between age and sleep changes in adults with cancer
• Review management options
Sleep is...

- Comprised of Non-REM and REM phases
  - One cycle in about 120 minutes, with 4-6 cycles per night
- Managed by 3 processes: homeostasis, circadian rhythm, and ultradian processes
  - Homeostasis: S process, drive to sleep
  - Circadian rhythm: C process, internal regulatory process, rooted in hypothalamus
    - Entrained by light, food, stress, temperature, hormones, etc.
  - Ultradian processes: regulate Non-REM and REM alteration
  - S and C responsible for sleep consolidation, but changes to C have a greater impact
Factors that make older adults more at risk for sleep disturbance

- Changes in sleep architecture: more Non-REM and less REM sleep
  - Harder time falling asleep and staying asleep

- Alterations to circadian rhythms (McClung and colleagues, 2016)
  - Early wakening, less robust control over body temperature
Factors that may increase sleep disturbance and insomnia in individuals with cancer (Spielman and colleagues, 1987)

- Predisposing: genetic, physiological or psychological factors (female gender, vulnerability to stress)
- Precipitating: life events, physiological or psychological factors
  - Cancer and its treatments that alter levels of inflammatory cytokines may disrupt homeostasis and circadian rhythms or sleep wake cycles
  - side effects and symptoms of cancer and tx (pain, medications such as (Howell et al, 2014)
- Perpetuating: behavioural factors (excessive daytime napping, maladaptive cognitions,
Saligan and colleagues, 2016
The patient reports...

• Sleep disturbance: inability to initiate or maintain sleep for more than 2 weeks
• Acute Insomnia: up to one month, non-refreshing sleep with impairment in daytime functioning
• Chronic Insomnia: more than 4 weeks, impairment in daytime functioning, fatigue, cognitive impairment (concentration, memory)
Treating and Managing Sleep Disturbance

• Routine assess for treatable causes
  – Sleep apnea
  – Infection
  – Delirium
  – Allergy
  – Behavioural causes and stressors
  – Environmental (hot/cold, noise)
  – Medications
    • Psychostimulants, antidepressants, anti-hypertensives, bronchodilators, corticosteroids
• Sleep hygiene (insufficient evidence):
  – wake up at the same time
  – maintain consistent bedtime
  – regular exercise up to 4 hours before bedtime
  – relaxing activities before bedtime
  – quiet bedroom
  – cool temperature
  – no caffeine or nicotine for 6 hours before bedtime
  – alcohol in moderation but none in 4 hours before bedtime
  – avoid napping
  – avoid fluid intake before bedtime
• Cognitive behavioral therapies
  – Sleep restriction*
  – Stimulus control*
  – Cognitive restructuring
  – Relaxation therapies*

• *recommended by the American Association of Sleep Medicine. Studies of CBT have been mixed.
Exercise interventions

- Some evidence of benefit for home-based walking programs, but only a few studies
• Pharmacologic interventions
  – Short term benefits are clear but given long duration of sleep disturbance in cancer patients, the potential for dependence cannot be ignored
  – No clear recommendations for which medications to use in older adults.
Take home messages

• Older individuals are at increased risk for sleep changes
• Routinely assess for possible sleep changes
  – Treat correctable causes
  – Manage chronic sleep changes
    • Sleep hygiene
    • Sleep restriction
    • Stimulus control
    • Relaxation