Sleep Disturbances

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Most Common Sleep Complaints

- Difficulty with...
  - Falling asleep
  - Staying asleep
  - Early morning awakening with inability to resume sleep
  - Non-refreshing/Non-restorative sleep
  - Daytime sleepiness
Insomnia

- The most common sleep disorder in cancer patients
- Daytime consequences
  - Reduced alertness
  - Fatigue
  - Irritability
  - Impaired motivation
  - Headache, GI distress
Impact on Cancer Outcomes

- Reduced QOL before, during and after treatment
- Decreased survival, poor follow-up and occurrence of other symptoms
  - Pain, nausea, fatigue
- Difficult to measure
- Minimal amount of prior and ongoing research
Prevalence

- Up to 57% of patients with early breast cancer
  - 15% in the general population
- Higher risk of insomnia
  - Overweight/obese patients
Rule Out the Obvious

- Excessive caffeine, alcohol, or corticosteroids
- Anxiety disorder
- Depression
- Pain
- Obstructive sleep apnea
Mechanism

- Common pathway - heightened arousal
- Cancer patients demonstrate altered...
  - HPA axis
  - Circadian rhythms
    - Hormone imbalances resulting in increased risk of cancer, fatigue, loss of appetite, depression and pain
    - Shift workers with higher rates of cancer
Interventions

- Cognitive-behavioral therapy
- Complementary therapy
- Education
- Exercise
- Pharmacologic
CBT

- Focus on sleep initiation and maintenance
  - Decreasing arousal threshold
- Standard of care for chronic insomnia
- 4 RCTs done in cancer patients
  - All showed improvement based on QOL surveys
  - Variety of CBT techniques utilized
Stimulus Control Therapy

- Associate the bed with sleep
- Go to bed when sleepy
- Get out of bed when unable to fall asleep
- Wake up at the same time each morning
- No daytime napping
Sleep Hygiene Therapy

- Exercise regularly but not late in the evening
- No heavy/spicy food before bedtime
- Avoid caffeine/alcohol/nicotine before bedtime
- Maintain a quiet/dark sleep environment
Cognitive Therapy

- Goal is to change dysfunctional beliefs and expectations about sleep
- Attention-shifting and reappraisal
- Relaxation techniques
Complementary Therapy

- 4 RCTs using Mindfulness-Based Stress Reduction in different cancer patients
  - Combination of guided imagery and meditation
  - Only 1 trial showed improvement
- Small trials have shown improvement using:
  - Supportive group therapy
  - Expressive writing therapy
  - Hypnosis
  - Massage
Yoga

- RCT of 410 cancer survivors
- Improvement in sleep QOL for those who participated in ‘gentle’ hatha yoga
  - Sleep quality
  - Decreased daytime sleepiness
  - Used fewer sleep medications
Education/Information

- RCT using an informational tape
  - Men: RT for prostate CA had improvement
  - Women: chemo for breast CA, no improvement
Exercise

- Minimal evidence
- Possible trend showing improvement in sleep disturbances
- Needs confirmation/larger studies
Pharmacologic

- Most common intervention
  - Short-term efficacy in general population
- No studies in cancer patients!!
- Paradoxical impact
  - Rebound insomnia
- Poorer QOL in cancer patients along with increased severity of other symptoms
- Benzodiazepines
  - Lorazepam
  - Use limited by toxicities
    - Tolerance, withdrawal, sedation, delerium
- Non-benzodiazepine hypnotics
  - Zolpidem
  - Better tolerated but still cause somnolence, light-headedness
- Anti-histamines
  - Use with caution, especially in the elderly
Anti-Depressants

- **Mirtazapine**
  - At low doses, sedation is an adverse effect
  - Small studies have shown improvement in insomnia in cancer patients also being treated for depression

- **Trazodone**
  - No data in cancer patients

- **Paroxetine**
  - Effective for depression
  - No improvement in insomnia
Hormonal/Herbal Products

- Melatonin/Ramelteon
  - Neuro-hormone
  - Validated in general population
  - No data in cancer patients

- Valerian
  - Herbal supplement
  - No effect in a RCT of cancer patients in treatment
Simple, Practical Tips

- Regular exercise – but not before bedtime
- Limit caffeine/alcohol before bedtime
- The bedroom is for sleep/sex
- Conceal ready access to clocks
- Keep bedroom <68 degrees and quiet
- Establish regular/ritual bed/rising time
- Avoid high glycemic index bedtime snacks
- Develop a soothing evening ritual
Conclusions

- Scope of the problem
  - Likely under-reported
- Multi-factorial
  - Cancer itself plays a significant role
- Multiple treatment options
  - CBT
  - Medications
  - Yoga, exercise, education
Questions?

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