

SUNDOWNING SYNDROME

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OUTLINE

1. Definition
2. Epidemiology
3. Risk factors
4. Causes
5. Management



DEFINITION

- NOT A DIAGNOSIS; NOT IN DSM IV.
- A.K.A. “Nocturnal Delirium”
- Def. Behaviors occurring in some older patients, with or without dementia, at the time of nightfall or sunset.
- Behaviors include confusion, anxiety, agitation, or aggressiveness with increased motor activity like pacing, wandering, resistance to redirection, and increased verbal activity like yelling.
- Unlike delirium these behaviors are worse in the evening.

EPIDEMIIOLOGY



- **NOT UNCOMMON.**
- Reports range from 2.4-25%.
- In patients with known Alzheimer's or dementia range widens to 2.4-66%.
- Little is known about gender or race prevalence's.

RISK FACTORS

PHYSIOLOGIC: Impaired circadian rhythmicity secondary to damage to the suprachiasmatic nuclei (SCN) of the hypothalamus and decreased production of melatonin (a hormonal regulator of circadian rhythm).



RISK FACTORS

ENVIRONMENTAL: Changes in environment, amount of daily light exposure, activities during the day, noise level, night disruptions, medications, and patient's medical comorbidities.



CAUSES

- Majority of theories center on circadian dysregulation:
- Inadequate exposure to light during the day.
- Low lighting and increased shadows aggravate late-day confusion.
- Decreased volume of the SCN in demented patients.
- Decreased CSF levels of melatonin.

MANAGEMENT

PHARMACOLOGIC:

- Correct circadian disruption with melatonin.
- Variable benefit with sedative hypnotics and benzodiazepines. Beware paradoxical excitement.
- Atypical antipsychotics effective for psychosis/agitation (risperdal 0.25-2.0mg).
- Single study noted benefit with donepezil.

MANAGEMENT

NONPHARMACOLOGIC:

- Bright light therapy between 0930-1130.
- Pain management.
- Behavior modification (redirection, reassurance, and distraction).
- Music therapy, aromatherapy, simulated presence therapy, sleep hygiene routine, daily physical activity.

CONCLUSION

- Sundowning is a common clinical phenomenon in demented patients and is a significant challenge for families and caregivers.
- Evidence suggests a circadian rhythm disturbance.



CONCLUSION

- Melatonin, antipsychotic medications, donepezil, bright light therapy, and behavioral modification have been helpful.



**CURE SOMETIMES,
RELIEVE OFTEN,
CARE ALWAYS.**

