Clinical Resource Guide:
Delirium Management in Hospice

INTRODUCTION TO DELIRIUM

Delirium can be an alarming and distressing symptom experienced at the end-of-life, for both the patient and caregiver(s). Delirium can result from a number of causes, and effective management requires both an understanding of the patient and knowledge of the multi-faceted approach to necessary to effectively manage and provide comfort to the hospice patient. This guide has been designed to equip the hospice care team with the knowledge and strategies necessary to assess, limit and effectively manage the symptoms of delirium through the development of a patient-specific treatment regimen.

Pharmacist Corner Objectives

1.) Assess for delirium using a validated screening instrument and diagnostic tool
2.) Develop a treatment plan to address symptoms of delirium
3.) Recommend a monitoring plan and determine when to adjust therapy as indicated

DELIRIUM DEFINED

- A disturbance in attention, awareness and cognition that develops over a short period of time, usually hours to a few days
- Represents a change from baseline, tends to fluctuate in severity throughout the day
- Can take several forms:
    - *Hyperactive form*: patient presents as withdrawn, agitated or aggressive
    - *Hypoactive form*: patient presents as sluggish with reduced psychomotor activity
    - *Mixed form*: patient experiences normal level of psychomotor activity or rapid switching between forms during the day or even during the episode

COMMON CAUSES OF DELIRIUM

Common Factors Contributing to Delirium
Treatable
Medications
▪ Anticholinergics ▪ Opioids ▪ Sedatives ▪ Corticosteroids ▪ Levodopa ▪ Fluoroquinolones
Abrupt discontinuation of the following:
▪ Opioids ▪ Benzodiazepines ▪ SSRIs/SNRIs ▪ Barbiturates ▪ Beta-blockers
Infections
▪ UTI ▪ Pneumonia ▪ Opportunistic
Physical/Physiological
▪ Constipation ▪ Urinary retention ▪ Uncontrolled pain ▪ Dehydration

BEHAVIORS, SIGNS AND SYMPTOMS OF DELIRIUM

SYMPTOM/CHARACTERISTIC	DEFINITION
Acute onset	Rapid onset of symptoms (minutes to days), even if symptoms began or have occurred in the past
Agitation	Unintentional, excessive, purposeless cognitive and/or motor activity. Often presents as restlessness
Altered level of consciousness	Clinically differentiable degrees of awareness and alertness (may present as: hypervigilant, alert, lethargic, cloudy, stuporous or comatose
Confusion	Not oriented to person, place, time or situation
Delusion	Fixed and false belief of wrong judgment not altered by opposing evidence. May present as paranoid, grandiose, somatic and persecutory
Disinhibition	Unable to control immediate impulsive response to a situation
Disorganized thought patterns	Thoughts that are confusing, vague, and often do not logically flow, or are loosely connected
Fluctuation, waxing/waning	Rapid change in intensity, symptoms may come and go
Hallucination	Perception of object that does not exist. May be visual, auditory, olfactory, gustatory or tactile
Inattention	Inability to focus or logically direct thoughts
Irritable	Patient presents with excessive impatience, annoyance or anger to get needs met
Labile affect	Rapidly changing and out of context mood symptoms
Psychosis	Loss of contact with reality

SCREENING TOOLS TO ASSESS AND DIAGNOSE DELIRIUM

Confusion Assessment Method (CAM)		
The diagnosis of delirium by CAM requires the presence of BOTH A and B		
A.	**Acute Onset** ***AND*** **Fluctuating Course**	Is there evidence of an acute change in mental status from baseline Does the abnormal behavior • Come and go? • Fluctuate during the day? • Increase/decrease in severity
B.	**Inattention**	Does the patient: • Have difficulty focusing attention? • Become easily distracted? • Have difficulty following what is said?
And the presence of either C or D		
C.	**Disorganized Thinking**	Are the patient's thoughts: • Confusing, vague or do not flow logically? • Incoherent? Does the patient present with: • Rambling speech, irrelevant conversation • Unpredictable switching of conversations • Unclear or illogical flow of idease
D.	**Altered level of consciousness**	Patient's level of consciousness varies from baseline and presents as: • Alert (normal) • Vigilant (hyper-alert) • Lethargic (drowsy, easily arousable) • Stuporous (difficult to rouse • Comatose (unarousable)

Memorial Delirium Assessment Scale (MDAS)	
Purpose	Designed to diagnose delirium as well as determine delirium severity
Description	Tool reflects delirium diagnostic material from DSM IV; can be administered multiple times/day to measure and assess changes in severity due to interventions
Scoring	10 severity items rated 0 to 3 points for a maximum total score of 30, with scores $\geq$ 13 indicate the presence of delirium, and higher scores indicating increased severity
Access	Click here to access the MDAS tool

MANAGEMENT OF DELIRIUM

If consistent with the patient's diagnosis, prognosis, functional status and goals of care, first attempt to address causes contributing to delirium. The following table lists some of the more common reversible contributors to delirium and provides some insight into management:

Addressing Reversible Causes of Delirium
Opioid Toxicity
Consider decreasing dose or rotating to another opioid with less risk of neuroactive metabolites (ex: methadone
Deprescribing
Review med list and wean/discontinue offending medications, such as anticholinergics
Hypoxia
Optimize respiratory therapy with emphasis on replacing inhalers with nebulized treatments

Nonpharmacologic treatment approaches are key to effective delirium management, with impactful interventions listed below:

Nonpharmacologic Treatment Strategies
Orienting Activities
1. Ensure patients use their glasses, hearing aids, etc, to optimize orientation, decrease confusion and promote better communication 2. Engage patient in mentally stimulating activities to help with disordered thinking 3. Provide orienting and familiar materials to help with awareness of time, date, location and people in contact 4. Ensure individuals identify themselves each time they encounter the patient, even if only minutes apart 5. Utilize family or familiar volunteers as constant companions to help reassure and reorient 6. Monitor fluid intake; rehydrate with oral fluids containing salt, for example, soups, sport drinks, red vegetable juices, when necessary, infuse fluids subcutaneously rather than intravenously
Stimulation
1. Limit number of people interacting with patient 2. Provide adequate soft lighting so patients can see without being overstimulated by bright lights 3. Limit stimulation whenever possible (loud music, TV) 4. Encourage medical staff to sit when engaging with patient
Nutrition
1. Ensure patients have good nutrition and an effective bowel and bladder management strategy 2. Monitor fluid intake; rehydrate with oral fluids containing salt, for example, soups, sport drinks, red vegetable juices, when necessary, infuse fluids subcutaneously rather than intravenously

Comfort
1. Ensure optimal symptom management as constipation and uncontrolled pain can result in delirium 2. Avoid physical restraints unless needed as a last resort to temporarily ensure the safety of both staff and a severely agitated and not redirectable patient and only until less restrictive interventions are possible 3. Provide warm milk, massage, warm blankets, and relaxation tapes to optimize sleep hygiene and minimize sleep disturbances

After addressing reversible causes and implementing nonpharmacologic interventions, additional action may be necessary to appropriately manage patient symptoms. When this occurs, pharmacologic management may be necessary, with an emphasis placed on patient and caregiver safety. The following medications can be helpful to address patient symptoms, improve comfort and reduce patient & caregiver distress:

Pharmacologic Treatment Strategies				
Typical Antipsychotics				
Medication	**Indications**	**Contraindications**	**Dosing**	**Adverse Effects**
Haloperidol	▪ Most commonly used ▪ Hyperactive delirium ▪ Hypoactive delirium ▪ Titrate for rapid response	Parkinson's disease; can worsen motor symptoms. *Quetiapine* recommended instead	0.5-1mg PO/SL Administer q2-4 hours prn, titrate to effect	Dystonia QTc prolongation
Risperidone	▪ Less risk of EPS ▪ Better for long-term use	Parkinson's disease: See above	0.25-0.5mg BID-TID, titrate to effect up to 6mg/day	EPS, Hypotension, Insomnia, Headache
Atypical Antipsychotics				
Medication	**Indications**	**Contraindications**	**Dosing**	**Adverse Effects**
Olanzapine	▪ Less risk of EPS ▪ Good for long-term use ▪ Weight gain side effect may be beneficial for some	Parkinson's disease Seizure disorder (lowers threshold)	1.25-5mg daily to BID	Sedation, Orthostatic hypotension, hyperglycemia
Aripiprazole	▪ Negligible QTc impact ▪ Minimally sedating ▪ Better for hypoactive	Parkinson's disease Seizure disorder (lowers threshold)	5-20mg po daily	Sedation, EPS Wt gain
Quetiapine	▪ Parkinson's-related hallucinations ▪ Night-time sedation	Seizure disorder (lowers threshold)	12.5-200mg/day in a single dose or divided	Sedation, Orthostatic hypotension
Mood Stabilizer				
Medication	**Indications**	**Contraindications**	**Dosing**	**Adverse Effects**
Valproic Acid	▪ Mood and behavior fluctuations ▪ Disinhibited behaviors (aggression, sexual)	Hepatic dysfunction	125-250mg q12h Titrate to effect Max dose: 1000mg/day	N/V, Dyspepsia, Diarrhea

Pharmacologic Treatment Strategies (Continued)				
Benzodiazepines				
Medication	**Indications**	**Contraindications**	**Dosing**	**Adverse Effects**
Lorazepam	▪ Alcohol and substance withdrawal ▪ Adjunct for agitated delirium (short-term or actively dying)	Severe depression	0.5-1mg PO/SL/IV 2-4 times/day typically, up to hourly at end-of-life	Paradoxical agitation, Sedation, Transient amnesia

SUMMARY

Delirium can be a very distressing experience, especially in the hospice setting, but a thorough assessment can result in implementation of an effective treatment plan. Reliance on nonpharmacologic interventions is not only recommended, but necessary in most cases in order to effectively manage delirium. Identification of contributing factors is essential to symptom resolution. If pharmacologic intervention is required, after initiating therapy, patients should be reassessed regularly to determine efficacy and tolerability of medication regimen. For questions regarding patient-specific scenarios, please call BetterRX for a Clinical Pharmacy Consultation.

References

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