A Practical Approach
Managing Difficult Behaviors in Patients with Delirium / Dementia

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Audience Response System

• Through the use of this interactive learning tool, the participants will:
  – Discuss complex case scenario of typical problems encountered in the assessment and palliative management of patients with delirium and behavioral symptoms
  – Receive instantaneous feedback and be able to gain peer perspective that will enhance discussion.

Goals & Objectives

Upon completion of this presentation, participants will be better able to assess and understand:

– Behavioral and Psychological Symptoms associated with Delirium and Dementia
  • The Causes
  • The impact on patient, family, caregiver and physician
  • The rights of patients to be free from seclusion and/or restraints
  • Management of behavioral and psychological symptoms
    – Non-pharmacological
    – Pharmacological
    – Responding to Urgent Behavioral Problems
Dementia, Alzheimer's type, is the _____ leading cause of death among older adults.

1. 3rd
2. 5th
3. 8th
4. 12th
5. 16th

Disturbance of consciousness that develops rapidly, predominately effects attention and has a fluctuating course is

1. Delirium
2. Psychosis
3. An hallucination
4. Associated with depression
5. Panic disorder

MaryJane has metastatic breast cancer and resides in SNF. She become irritable, uncooperative and abusive. Because of her disruptive and unsafe behavior you recommend...

1. Ativan to decrease agitation.
2. Restraining her for her own safety
3. Antipsychotic Medication
4. A sitter
5. Isolate her in a private room
A predominate concern in the management of patients with dementia is...

1. Pain control
2. Food and fluid consumption
3. Social engagement
4. Patient and Caregiver safety
5. Prevention of falls

Definitions

• Dementia
  – A chronic deterioration of intellectual function and other cognitive skills…

• Delirium
  – Acute change in mental status not related to dementia that develops over hours to days and tends to fluctuate during the course of the day.

Behavioral & Psychological Symptoms

- Disinhibition
- Euphoria
- Sleep Disturbances
- Appetite Disturbances
- Anxiety
- Apathy
- Depression
- Hallucinations
- Delusions
- Agitation
- Aggression
- Irritability
- Psychomotor Hyperactivity
Behavioral Symptoms

Psychosis
- Hallucinations 23 – 76%
- Delusion 37 – 70%

Common Associations
- Auditory
- Visual
- Tactile
- Verbal
- Vocal
- Physical

Agitation
- Auditory
- Visual
- Tactile
- Verbal
- Vocal
- Physical

Behavioral Symptoms
(Delirium)

• Prevalence
  - 60 - 98% of patients with dementia
  - 80 - 85% of terminally ill patients
  - 14 - 56% of hospitalized elderly patients
  - 85% of cancer patients prior to death
  - 70 - 87% of patients in ICU

• Impacts
  - Patient / Family
  - Caregivers / Medical Staff

• Contribute to high levels of family caregiver...
  - Stress
  - Grief
  - Frustration
  - Depression
  - Isolation
  - Interpersonal Conflicts
  - Work Related Conflicts
  - Financial Burden

Major reason for placement in a Long-Term Care Facility
Case Presentation

Mary Jane is an 87 year old ♀ with Dementia, Alzheimer’s type.

Co-morbidity
1. Non-insulin dependent diabetes
2. Ischemic Heart Disease
3. Chronic Atrial Fibrillation
4. Congestive Heart Failure, compensated
5. Essential Hypertension
6. Osteoarthritis
7. Osteoporosis

Location
Lives at the home of her daughter and family.

– Interim History
  – Hospitalizations
    - Fall → Fracture (L) Femur → Surgical fixation
    - Urosepsis
  – Emergency Room Visits x 3
    - Altered mentation
    - Pneumonia
    - Fall

– Weight: 112 lbs  Height: 66”  BMI: 18.1

– Function
  - Bed-to-chair existence
  - Unsteady Gait – suppose to ambulates with walker
  - Needs some assist with ADL’s
  - Frequently incontinent of bowel & bladder
  - Able to self-feed

– Cognition
  - Alert, responds to simple questions and commands.
    Frequently confused and occasionally delusional.
Mary Jane

Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
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<tbody>
<tr>
<td>Lisinopril 10mg</td>
<td>qd</td>
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<tr>
<td>Aprazolam .5mg</td>
<td>tid pm</td>
</tr>
<tr>
<td>Furosemide 40mg</td>
<td>qd</td>
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<tr>
<td>Glyburide 5mg</td>
<td>bid</td>
</tr>
<tr>
<td>Spironolactone 25mg</td>
<td>qd</td>
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<tr>
<td>Metformin 500mg</td>
<td>bid</td>
</tr>
<tr>
<td>Digoxin 0.125mg</td>
<td>qd</td>
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<tr>
<td>Zolpidem at hs</td>
<td></td>
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<tr>
<td>Spironolactone 25mg</td>
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<tr>
<td>Metformin 500mg</td>
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<tr>
<td>Digoxin 0.125mg</td>
<td>qd</td>
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<tr>
<td>Zolpidem at hs</td>
<td></td>
</tr>
<tr>
<td>Metoprolol 50mg</td>
<td>bid</td>
</tr>
<tr>
<td>Simvastatin 40mg</td>
<td>qd pm</td>
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<tr>
<td>Donepezil 10mg</td>
<td>at hs</td>
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<tr>
<td>Alendronate 10mg</td>
<td>qd</td>
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<tr>
<td>Warfarin 4mg</td>
<td>qd</td>
</tr>
<tr>
<td>Propoxyphene/acetamin</td>
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<tr>
<td>Memantine 10mg</td>
<td>bid</td>
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<tr>
<td>Omeprazole 20mg</td>
<td>qd</td>
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</table>

Mary Jane has insomnia with increased confusion and wandering at night. How would you address this problem?

1. Change Zolpidem to Ambien-CR
2. Restraints
3. Trazodone 25mg at hs
4. Temazepam (Restoril) 15mg at bedtime
5. Mirtazapine (Remeron) 15mg at hs
6. Non-pharmacologic Interventions

Sleep Disturbance

- Prevalence 25 – 50%
- Cause
  - Aging / Medication / Untreated Pain / Poor Sleep Hygiene
- Treatment
  - Adapt sleep pattern to individual’s routine
  - Environmental considerations
  - Establish regular sleep and waking times
  - Avoid fluid intake in the evening
  - Relaxation techniques / Avoid over-stimulation
- Evaluate for restless leg syndrome & sleep apnea
- Review medications
- Pharmacologic —— Trazodone / Mirtazapine / Zolpidem
Mary Jane suddenly becomes confused and does not recognize her daughter. She is becoming more and more agitated. An underlying cause might be…

1. Constipation
2. Pain
3. UTI / Urosepsis
4. Delirium
5. Medication
6. All of the above

Assessing Behavior

The Basics

• Is the safety of patient and/or caregiver compromised?
• Is it New or Exacerbation of Old Behavior?
• Have there been any changes?
  – Environment
  – Medical Condition
  – Medication
• Is it Delirium?
• Elder abuse?

Behavioral Manifestations

Conceptualizing the Cause

Environmental

Location
Caregiver
Disruption of Routines
Roommate
Noise
Lighting
Temperature
Loss of a prized possession

Medical

Medical Illness
Pain
Constipation
Urinary Retention
Medications

Infection
Exacerbation of pre-existing conditions
Thromboembolic disease
...Behavioral Manifestations

Conceptualizing the Cause

Psychiatric

Depression

Pre-existing Conditions

Schizophrenia

Bipolar

Recurrent Depression

Chronic Anxiety or Panic Disorders

Obsessive Compulsive Disorders

History of ETOH or Drug Abuse

Delirium

Impaired behavior affects attention disturbed consciousness develops rapidly fluctuating course reversible is not dementia may persist for days to months.

The American Psychiatric Association's Diagnostic and Statistical Manual, 4th edition (DSM-IV)

Diagnosis of Delirium

Disorientation

Level of Consciousness

Psychomotor Activity

Short-term memory Impairment

Impaired Digital Span

Delusions

Perceptual Disturbance

Disorganized Thinking

Abnormal sleep-wake cycle

Impaired Attention

Impaired Cognition

Impaired Behavior

Develops Rapidly

Fluctuating Course

Reversible

Is not Dementia

Impaired Attention

The American Psychiatric Association's Diagnostic and Statistical Manual, 4th edition (DSM-IV)
Causes of Delirium

- Systemic
  - Cardiopulmonary
  - GI / Renal
  - Hepatic
  - Neurologic

- Traumatic

- Infectious

- Metabolic
  - Electrolyte / Endocrine
  - Hypoxemia / Hypercarbia
  - Hyper / Hypoglycemia

- Medication
  - Adverse Reactions
  - Drug Interactions
  - Antibiotics
  - Opioids
  - Benzodiazepines
  - Aricept, Namenda
  - SSRI’s
  - Atropine, Benztropine, Diphenhydramine, Scopolamine, Tegretol, Phenytoin, Valproate, Mirtazapine, SSRI’s, Clonidine, Digoxin, Zyvox...

Just to Name a Few

Medications Implicated in Delirium


Just to Name a Few

Question 7

You are unable to identify a trigger for Mary Jane’s behavior. You recommend...

1. Restraining
2. Benzodiazepine (Ativan)
3. Haloperidol (Haldol)
4. Quetiapine (Seroquel)
5. Non-Pharmacological Interventions
6. Transport to ER
Non-Pharmacological Interventions (NI)

- Agitation
  - Time for rest
  - Distraction
  - Change in activity/location
  - Music / Pets / Aromatherapy
  - Comfort Cart
- Hallucinations / Delusions
  - Comfort / Reassure
  - Eliminate cause
  - Threatening?
  - Pharmacotherapy
- Confusion / Fear / Depression
- Sleep Disturbance / Pain

Question 8

You receive a call that they are unable to administer the prescribed medication orally. You recommend…

1. Haloperidol 1mg SQ
2. Lorazepam 1mg SQ
3. Chlorpromazine 50mg suppository per rectum
4. Olanzapine (Zyprexa) 5mg IM
5. Transport to ER

Treatment Strategies

Investigate before Prescribing

Identify and Correct Underlying Cause

- Non-pharmacologic Approaches
- Pharmacotherapy
Physical Restraints

- Patients have the right to be free from seclusion and/or restraints:
  - May be appropriate when the patient and/or caregiver's safety is threatened and less restrictive interventions have been ineffective.
- Medication Management
  - Does not treat underlying cause of behavior
  - May not improve quality of life
  - May conceal important symptoms

Pharmacological Treatments Guidelines

- Pharmacokinetics in the Elderly
  - ↓ Renal Clearance
  - ↓ Hepatic Metabolism
  - ↑ Risk of Side-effects with multiple medications
- Recommendations
  - Low Starting Dose
  - Small Dose Increases
  - Long Intervals between dose Increases
  - Avoid Polypharmacy

Medication Guidelines

Review Patient’s Current Medications

1. Determine Appropriateness
2. Polypharmacy...identify non-beneficial drugs
   - Eliminate / Reduce Pill Burden
Pharmacologic Management
Cholinesterase Inhibitors

- Donepezil (Aricept), rivastigmine (Exelon), and galantamine (Razadyne) are currently approved for use as a trial in mild to moderate Alzheimer's disease by the US Food and Drug Administration (FDA).
- Patients with dementia may also benefit from memantine (Namenda) and other therapies.
- “...associated with increased rates of syncope, bradycardia, pacemaker insertion, and hip fracture in older adults with dementia” May 11 issue of the Archives of Internal Medicine

Pharmacologic Management
Strategies

1. Is the patient or caregiver's safety at risk?
2. Is the patient psychotic?
   a) Delusions or Hallucinations?
      1) Yes
         a) Treat with antipsychotic
            i. if symptoms are troublesome or jeopardize the patient or caregiver
         ii. Use caution with Lewy body dementia
      2) No
         a) Non-pharmacologic Interventions
         b) Seclusion and/or physical/chemical restraints should only be utilized when alternative approaches have failed

Pharmacotherapy
Agitation / Aggressive / Combative

- Antipsychotics
  - Haloperidol (Haldol)
  - Chlorpromazine (Thorazine)
  - Risperidone (Risperdal)
  - Olanzapine (Zyprexa)
  - Quetiapine (Seroquel)
- Trazodone
- Anticonvulsants (Mood Stabilizers)
  - Divalproex sodium (Depakote)
  - Valproic Acid
  - Carbamazepine (Tegretol)
...Pharmacotherapy
Agitation / Aggressive / Combative

- Antidepressant
  - Selective serotonin reuptake inhibitors (SSRIs)
  - Serotonin-norepinephrine reuptake inhibitors (SNRIs)
- Benzodiazepines
- Cholinesterase Inhibitors
  - Donepezil (Aricept)
  - Rivastigmine (Exelon)
  - Galantamine (Razadyne)
- NMDA Receptor Antagonists
  - Memantine (Namenda)
- Buspirone (Buspar)

...Antipsychotics

<table>
<thead>
<tr>
<th>Antipsychotics</th>
<th>Half-life (hrs)</th>
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<tbody>
<tr>
<td>Haldol 0.25-5mg q 1-12h</td>
<td>PO, PR, SQ, IV*, IM</td>
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<tr>
<td></td>
<td>Maximum dose (100mg)</td>
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<tr>
<td>Thorazine 10-100mg q 4-6h</td>
<td>PO, PR, IM, IV</td>
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<tr>
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<td>Maximum dose 1000mg</td>
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<tr>
<td>Risperdal 0.25-2mg 1-2x daily</td>
<td>PO</td>
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<td></td>
<td>Maximum dose 6mg</td>
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<tr>
<td>Zyprexa 1.25mg - 15mg 1x daily</td>
<td>PO, IM, SQ</td>
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<td></td>
<td>Maximum dose 30mg</td>
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<tr>
<td>Seroquel 12.5mg - 400mg 1-3x daily</td>
<td>PO</td>
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<tr>
<td></td>
<td>Maximum dose 1200mg</td>
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</table>

...Antipsychotics...side effects

- Typical Neuroleptics
  - Highly sedating
  - Extrapyramidal symptoms
  - Anticholinergic Activity
  - Can worsen memory & cognition
- Atypical Neuroleptics
  - Lower incidence at lower doses
  - Extrapyramidal symptoms
  - Somnolence
  - Abnormal gait
FDA “Black Box” Warning
April 2005

- Warning for treatment of behavioral disorders in elderly patients with dementia
  - Risperidone / Olanzapine / Quetiapine
  - Increased mortality (observed within 10-12 wks of initiating medication)
    - Heart failure
    - Sudden death
    - Infections (mostly pneumonia)
    - Stroke?

Mary Jane has sustained several falls while attempting to get out of the wheelchair. You recommend...

1. Utilize a lap-buddy
2. Utilize an alarm system
3. Determine if there are unmet needs
4. Position her closer to the nursing station

Urgent Behavioral Problems

1. First Consider the etiology:
   1. Pain?
   2. Bowel Movement?
   3. Urinary Retention?
   4. Fever / Infection?
   5. Dehydration?
   6. Medication?
   7. Change in environment or caregiver
2. Is the patient or caregiver’s safety compromised? Is there excessive fear/anxiety
3. Short term fix
Dangerous Combative Behavior

- **Rapid Tranquilization**
  - Haloperidol 2 to 5mg SQ/IM/IV
    - May repeat every hour x 3 doses
    - Maximum dose 100mg/24 hour
  - Chlorpromazine 50 mg PO/PR/IM
    - May repeat in 1 hour x 3 doses
    - Maximum dose 1000mg/24 hours
  - Olanzapine (Zydis) 2.5mg to 10mg IM/ (PO)
    - May repeat in 1 hour x 3 doses
    - Maximum dose 30mg/24 hours

Antipsychotic Pharmacokinetics

Summary

- **Behavioral and Psychiatric Symptoms**
  - Challenging...difficult to treat
  - Overwhelming to patients, families, caregivers and medical staff
  - May lead to over-medicating
    - Limited benefits & potential side-effects
  - Always consider non-pharmacological interventions first
  - Remember patient / caregiver safety
Appendix

MDAS
Memorial Delirium Assessment Scale

ITEM 1 - REDUCED LEVEL OF CONSCIOUSNESS (AWARENESS):
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 2 - DISORIENTATION:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 3 - SHORT-TERM MEMORY IMPAIRMENT:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 4 - IMPAIRED DIGIT SPAN:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 5 - REDUCED ABILITY TO MAINTAIN AND SHIFT ATTENTION
- 0: none
- 1: mild
- 2: moderate
- 3: severe

MDAS
Memorial Delirium Assessment Scale

ITEM 6 - DISORGANIZED THINKING:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 7 - PERCEPTUAL DISTURBANCE:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 8 - GELUSIONS:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 9 - INCREASED OR INCREASED PSYCHOMOTOR ACTIVITY:
- 0: none
- 1: mild
- 2: moderate
- 3: severe

ITEM 10 - SLEEP-WAKE CYCLE DISTURBANCE (DISORDER OR ABNORMALITY):
- 0: none
- 1: mild
- 2: moderate
- 3: severe

TOTAL
Reference

- Hamilton, G. & J. Dougherty, RN. “Improving Hospice Care for Advanced Dementia”. 2004 AAMHP Annual Assembly
- Irwin, S., Pimelto, A., Fents, F., San Diego Hospice and the Institute of Palliative Medicine, San Diego, CA. A Butcher, a Baker, and Two Candlestick Makers: Evidence-Based Perspectives on Delirium Recognition, Work-Up, and Management from a Psychiatrist, a Pharmacist, and Two Palliative Medicine Specialists (505). 2009 AAHPM Annual Assembly
- Alzheimer’s Association Campaign for Quality Residential Care. Dementia Care Practice Recommendations for Assisted Living Residences and Nursing Homes. Phase 3 End of Life Care. Aug. 2007
- New Developments in the Assessment and Management of Delirium in Palliative Care. Eduardo Burera, MD, M.D. Anderson Cancer Center, Houston, TX. March 2009 AAHPM Annual Assembly, Austin, Texas