Diagnosis and Treatment of the Three “Ds” (Depression, Delirium, and Dementia) in Older Patients with Cancer

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Background

Elders with Cancer at Increased Risk Due to:
- Pre-existing mood disorder
  - “minor depression”
- Pre-existing cognitive impairment
  - May range from MCI to full-blown dementia
- Polypharmacy
- “Depressogenic,” “Dementogenic,” and “Deliriogenic,” cancer treatments
- Decreased “cerebral reserve”
  - How much “good brain” is present

Flood et al 2006
- On a multidisciplinary Oncology-Acute Care for Elders Unit (OACE):
  - 27% (25) of 93 patients (mean age 74.1 years) "screened in" with cognitive impairment
  - About 1/3 of those patients had neither delirium nor dementia documented by their oncologist
- 24% (11) of 46 were depressed
  - Again, about 1/3 of them did not have this condition documented, and…
Many were at risk for delirium:
- On the OACE, the average # of routine medications at discharge was 6, with 18% taking ≥ 9...

65% received narcotics
- 19% took benzodiazepines
- 19% got diphenhydramine
- 15% received a sedating hypnotic

2% got TCAs
- 35% got ≥ 2 of the high-risk medications above
- 40% were prescribed a routine narcotic at discharge

For older patients with cancer, drugs or infections are among the most likely causes of delirium, and can also cause symptoms that "look" like depression or dementia

Risk Factors for Cognitive Dysfunction and/or Depression Likely to be Present in Many Elders With Cancer
- Predisposing
  - Advanced age
  - Pre-existing underlying cognitive impairment
  - Cerebral damage
  - Severe chronic illness
  - Functional impairment
- Precipitating
  - Drugs
    - Prescribed or OTC
    - Intercurrent illness
    - Infections
  - Metabolic disturbances
  - Dehydration
  - Malnutrition
  - CTX agents

Chemotherapy Agents That May Cause Delirium
- All of ‘em!!!
Definitions (brief!)

- **Depression**
  - Depressed or sad mood or loss of pleasure or interest
  - Sleep disturbance, decreased energy, impaired concentration, feelings of worthlessness, guilt

- **Dementia**
  - Significant loss of intellectual abilities
  - May include impairment of attention, orientation, memory, judgment, language, or motor and spatial skills

- **Delirium**
  - **Disturbance of consciousness**
  - A change in cognition that develops over a short time—a medical condition is (always!) etiologically related
  - May present with motor agitation or retardation, or as a mixed state

Why are these overlapping signs and symptoms so important?

Clinicians may (and often do!) misattribute symptoms to the wrong condition(s)—this can lead to incorrect treatment or no treatment at all.

Possible Consequences of Misdiagnosed or Missed Conditions

- Increased LOS
- Increased health care costs
- Discharge to LTC
- Irreversible loss of pre-morbid function
- Increased morbidity and mortality
- Increased patient and family stress
Identified Gaps in Current Literature

- Paucity of research on prevention
- What do nurses actually know?
- No consistent recommendations for nursing practice
- Limited research on nursing roles for symptom detection

Purpose

The purpose of this research was to learn how accurately nurses and senior nursing students differentiate among the symptoms of delirium, dementia, and depression.

Hypothesis

RNs and senior nursing students cannot accurately differentiate among the symptoms of delirium, dementia, and depression.

Triple D Assessment Instrument

- A 15-item signs/symptoms questionnaire in which participants check one or more diagnostic criteria that match signs and symptoms of that disorder (i.e., dementia, delirium or depression)
- Signs and symptoms from DSM-IV ("gold standard")
- Three items chosen for each condition that were specific to delirium, dementia, or depression and six items that "overlapped" two or more conditions
- Demographics included for correlative analysis

Delirium

1. Disturbance of consciousness (i.e., reduced clarity of awareness of the environment with reduced ability to focus, sustain or shift attention).
2. Subjective feelings of irritability or excessive anxiety.
3. Memory impairment with difficulty retaining new information or recalling previous information.
4. Transient results in poor concentration or difficulty making decisions.
5. Delirious results in lability of mood or inappropriate behavior.
6. Feelings of guilt and loss in pleasurable activities.
7. There is medical evidence from the history, physical exam, or laboratory findings that the patient's symptoms result from a medical condition.
8. Impaired ability to carry out daily activities and function.
9. Disorientation to time, place, and person in orientation and disorientation.

Dementia

10. Memory impairment with difficulty retaining new information or recalling previous information.
11. Reduced ability to carry out daily activities and function.
12. Disorientation to time, place, and person in orientation and disorientation.

Depression

13. Disturbance in sleep and/or appetite.
14. Disturbance in energy or activities.
15. Disturbance in social or occupational functioning.

Methodology

- Based on literature, four high-risk units at our hospital were chosen
  - General Medicine
  - General Surgery
  - Medical ICU
  - Cardio-Thoracic

- Senior BSN nursing students were chosen to evaluate understanding of these disorders prior to graduation.
Study Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;25</td>
<td>41</td>
<td>42</td>
</tr>
<tr>
<td>&lt; 25</td>
<td>57</td>
<td>58</td>
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<td></td>
</tr>
<tr>
<td>M</td>
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<td>F</td>
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<td>20</td>
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<tr>
<td>BS</td>
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<td>17</td>
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<tr>
<td>DIP</td>
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<td>3</td>
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<tr>
<td>Student</td>
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<td>61</td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10 years</td>
<td>18</td>
<td>46</td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>21</td>
<td>54</td>
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<tr>
<td>ICU/CT</td>
<td>23</td>
<td>56</td>
</tr>
<tr>
<td>Medical/Surgical</td>
<td>18</td>
<td>44</td>
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</tbody>
</table>

Findings

Overall Percent Correct Responses of RNs and Students Able to Distinguish Between the 3 Ds

<table>
<thead>
<tr>
<th></th>
<th>Delirium</th>
<th>Dementia</th>
<th>Depression</th>
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<tbody>
<tr>
<td>Delirium</td>
<td>65%</td>
<td>72%</td>
<td>77%</td>
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Repeated Measure (ANOVA) P<0.0001

- Significant ANOVA but does not tell which are different
- Paired t-tests comparing the three groups were all significant, p<0.0001

Is Experience (and Age) of RN a Factor in Accurate Identification of Symptoms?

<table>
<thead>
<tr>
<th></th>
<th>Delirium</th>
<th>Dementia</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>63%</td>
<td>72%</td>
<td>73%</td>
</tr>
<tr>
<td>Student</td>
<td>66%</td>
<td>73%</td>
<td>79%</td>
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</table>

t-test comparison p=.24 p=.63 p=.002

The results were similar, with similar p value, when age was examined

RNs' Experience

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Delirium</th>
<th>Dementia</th>
<th>Depression</th>
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</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>64%</td>
<td>67%</td>
<td>73%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>62%</td>
<td>75%</td>
<td>73%</td>
</tr>
<tr>
<td>t-test</td>
<td>p=.62</td>
<td>p=.01</td>
<td>p=.86</td>
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Some Implications

- It is unlikely that nurses alone know less about these conditions than is optimal
  - A similar study is planned for medical students, residents, fellows, and attending physicians
- Nurses are in a unique position to assess these patients and are the “first-line” in caring for them
  - If their assessment is incorrect, physicians are more likely to order incorrect interventions
- Changes in attitudes about these conditions and what might be considered “normal” aging, “just due to their cancer,” or “we see this” are necessary in order to provide optimal care
Assessment and Treatment

Diagnosis Rules of Thumb

- If you don’t suspect it you’ll never diagnose it—be suspicious
- If you expect to see agitation you’ll miss about 2/3 of cases of delirium
  - Hypoactive and mixed types more common than purely hyperactive form
  - Depression may present with agitation, motor slowing, or both; so can dementia
- Although there are good diagnostic instruments available for all three conditions, most are impractical or unnecessary
  - If DSM-IV criteria are met, it’s there!

More

- It’s entirely possible to have dementia, delirium, and depression present in the same patient
  - But apply the principle of Occam’s Razor here before making more than one diagnosis
- When depressed, many patients can’t form new memories or remember important old information
  - They are “demented” but it’s a potentially reversible dementia due to depression
    - Used to be called “pseudodementia” but it’s not—it’s real (and it’s bad)

Last

- Take what family members tell you with a “grain of salt”
  - They don’t want their loved one to be depressed, demented, or delirious
    - It’s bad enough that they have cancer

Treatment—Key Questions

1. How long can we wait?
   - e.g., typical antidepressants may take >4 weeks to work
2. Who else can help?
3. What about drug interactions?
   - Antiseizure meds, N/V meds, pain medications, CTX
4. What about side effects?
   - Anticholinergic effects and/or hypotension
5. Can I treat more than one condition with a single?

Medications

- Keep your armamentarium streamlined!
  - Antidepressants
  - Psychostimulants
  - Antipsychotics
  - Anxiolytics
  - “Anti-dementia” medications
Psychiatry in the Real World

- Comprises many common psychiatric problems*
  - depression
  - anxiety
  - substance abuse
  - pain syndromes/somatization
  - personality disorders
  - bereavement
  - reactions to acute and chronic illness
  - dealing with dying and death

* [this may be in the patient or in someone they care about]

Serotonin-Specific Reuptake Inhibitors

SSRIs

SSRIs (Compared to Heterocyclics)

- Extremely safe
- Death by OD unlikely
- Much less likely to disrupt cardiovascular system
- Less anticholinergic effect
- Less weight gain and sedation

SSRIs-Side Effects

- Nausea, vomiting, diarrhea
  - Take with food
- Anxiety, insomnia
  - Dose at different time of day
- Headache

PSYCHOSTIMULANTS

Psychostimulants

- Dextroamphetamine (dexedrine)
  - Begin at 2.5-10mg q 8AM
  - Increase dose by 2.5-5mg qod to ~20mg
  - May give second dose later in day
  - t1/2=6h
- Methylphenidate (ritalin)
  - Begin at 5-10mg q 8AM
  - Increase dose by 2.5-5mg qod to ~20mg
  - May need second or third dose later in day
  - t1/2=2-3h
Anxiety or Fear

Rule of thumb:
- For anxiety, use benzodiazepines (ativan, valium, serax, etc.)
- For fear, use neuroleptics (haldol, etc.)
- If you don’t know, use both
  - Excellent synergy b/t neuroleptics and bzdps

Anxiety/Fear

- For BZDPs
  - Lowest effective dose
  - Standing dose(s) may be better than pm
  - Pay attention to t 1/2 and rate of onset of BZDPs
    - Both features should influence choice
  - When combining neuroleptics and BZDPs
    - Start with lower doses of both
    - Watch for EPS (parkinsonism, dystonia, akathisia)

Most Important is to Identify and Reverse, When Possible, the Cause(s) of the Problem

Rule out the “Usual Suspects”
- Drugs, Drugs, Drugs
- Infections
- Withdrawal
- Postsurgical
- “Obvious”
Treat Symptomatically

- Haloperidol (Haldol) is the drug of first choice
  - High potency; virtually no anticholinergic or hypotensive properties; does not suppress respirations; minimal cardiotoxicity
  - Can give PO, IM, IV
- For frail elderly:
  - Mild: 0.5mg
  - Moderate: 1mg
  - Severe: 2mg
- For all:
  - Repeat dose q30 min until effect
  - Divide 24h dose into bid or tid doses
  - Taper over 1-5 days

Benzodiazepines

- Most appropriate in BZDP or ETOH W/D
  - In other cases may cause cognitive impairment and/or disinhibition
  - May be synergistic w/neuroleptics
    - Start w/small doses (0.5-1mg) lorazepam
    - Can give IV, SL, PO, IM
  - May want to use BZDP w/longer t₁/₂ for W/D symptom control

Other Treatments

- Physical restraints for patient/staff safety
- Decrease stimuli
- Keep patient oriented w/clock, calendar, etc.
- Adequate light to decrease illusions
- Family members present to help orient

Thank You!