Sedation and Delirium Questions

TLC Curriculum

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Question 1

Deep sedation in ventilated critically patients early in the ICU stay has been associated with which of the following outcomes:

A. Longer duration of mechanical ventilation
B. Higher in-hospital mortality
C. Higher 6-month mortality
D. All of the above
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Question 2

In addition to improving important clinical outcomes (positive effects), light sedation has the downside of higher rates of PTSD after critical illness, relative to deep sedation.

A. True
B. False
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A. True

B. False

_Crit Care Med_ 2009 Sep;37(9):2527-34
Question 3

Compared to benzodiazepines, dexmedetomidine is associated with:

A. Lower rates of delirium
B. Short duration of mechanical ventilatio
C. Reduced ICU length of stay
D. Reduced hospital length of stay
E. Both A and B
F. All of the above
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Question 4

You are admitting an intubated patient with pneumonia and severe sepsis on transfer from an outside hospital ICU. The patient’s eyes are closed when you enter the room, but when you shout their her name she opens her eyes but does not make eye contact. Her Richmond Agitation-Sedation Scale (RASS) score is:

A. -1  
B. -2  
C. -3  
D. -4  
E. -5
Question 4

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A. -1
B. -2
C. -3
D. -4
E. -5
Answer: C

+4 **Combative** Overtly combative, violent, immediate danger to staff
+3 **Very agitated** Pulls or removes tube(s) or catheter(s); aggressive
+2 **Agitated** Frequent non-purposeful movement, fights ventilator
+1 **Restless** Anxious but movements not aggressive vigorous
0 **Alert and calm**
-1 **Drowsy** Not fully alert, but has sustained awakening (eye-opening/eye contact) to voice (>10 seconds)
-2 **Light sedation** Briefly awakens with eye contact to voice (<10 seconds)
-3 **Moderate sedation** Movement or eye opening to voice (but no eye contact)
-4 **Deep sedation** No response to voice, but movement or eye opening to physical stimulation
-5 **Unarousable** No response to voice or physical stimulation
Question 5

The domains of delirium in the DSM-IV includes all of the following except:

A. Disturbance of consciousness
B. Evidence of psychomotor agitation
C. Change in cognition
D. Development over a short period
E. Fluctuation in symptoms
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Question 6

Which of the following has been demonstrated to reduce the incidence of delirium in medically critically ill, mechanically ventilated patients (perhaps by 50%):

A. Prophylactic lorazepam
B. Trazadone dosed at 2200 nightly
C. Early mobilization
D. Kenny G all day, every day
E. Prophylactic haloperidol
Question 6

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E. Prophylactic haloperidol
A patient in the ICU for decompensated heart failure causing respiratory failure with a current RASS of 0 (ranging from +1 to -2 over the past 24 hours), 3 errors on the Confusion Assessment Method-ICU (CAM-ICU) ‘letters attention test’ but no errors on the ‘disorganized thinking test’ tests:

A. Positive (Delirium present)
B. Negative for delirium (No Delirium)
Question 7

A patient in the ICU for decompensated heart failure causing respiratory failure with a current RASS of 0 (ranging from +1 to -2 over the past 24 hours), 3 errors on the Confusion Assessment Method-ICU (CAM-ICU) ‘letters attention test’ but no errors on the ‘disorganized thinking test’ tests:

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### Question 7

**Step 1 Level of Consciousness: RASS**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+4</td>
<td>COMBATIVE</td>
<td>Combative, violent, immediate danger to staff</td>
</tr>
<tr>
<td>+3</td>
<td>VERY AGITATED</td>
<td>Pulls to remove tubes or catheters; aggressive</td>
</tr>
<tr>
<td>+2</td>
<td>AGITATED</td>
<td>Frequent non-purposeful movement, fights ventilator</td>
</tr>
<tr>
<td>+1</td>
<td>RESTLESS</td>
<td>Anxious, apprehensive, movements not aggressive</td>
</tr>
<tr>
<td>0</td>
<td>ALERT &amp; CALM</td>
<td>Spontaneously pays attention to caregiver</td>
</tr>
<tr>
<td>-1</td>
<td>DROWSY</td>
<td>Not fully alert, but has sustained awakening to voice (eye opening &amp; contact &gt;10 sec)</td>
</tr>
<tr>
<td>-2</td>
<td>LIGHT SEDATION</td>
<td>Briefly awakens to voice (eyes open &amp; contact &lt;10 sec)</td>
</tr>
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</tbody>
</table>

If RASS is ≥ -3 proceed to CAM-ICU (Is patient CAM-ICU positive or negative?)

-4    | DEEP SEDATION     | No response to voice, but movement or eye opening to physical stimulation   |
-5    | UNAROUSABLE       | No response to voice or physical stimulation                               |

If RASS is -4 or -5 → STOP (patient unconscious), RECHECK later

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Step 2 Content of Consciousness: CAM-ICU

**Feature 1:** Acute change or fluctuating course of mental status

And

**Feature 2:** Inattention

And

**Feature 3:** Altered level of consciousness

Or

**Feature 4:** Disorganized Thinking

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Question 8

The *least* common subtype of delirium seen in the ICU is:

A. Hypoactive delirium
B. Hyperactive (agitated) delirium
C. Mixed delirium
Question 8

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B. Hyperactive (agitated) delirium

C. Mixed delirium
Question 9

A 73 year-old man with a history of CAD, CHF, and ongoing tobacco abuse is admitted with atrial fibrillation, acute left lower extremity ischemia, and pulmonary edema causing respiratory failure. He remains hypoxemic and tachypneic with severely elevated work of breathing despite CPAP 12 cm H$_2$O with 100% F$_{iO_2}$, and you endotracheally intubate him. Over the next several hours he is agitated and his respiratory efforts remains largely asynchronous with the ventilator despite intermittent bolus dosing of fentanyl and midazolam. The next step in management of sedatives and analgesics, in accordance with SCCM guidelines, would be:

A. Start fentanyl infusion
B. Start midazolam infusion
C. Start haloperidol 5 mg IV q6 hours prn
D. Start propofol infusion
E. Start dexmedetomidine infusion
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