I. Title: Altered Mental Status (BZD Overdose)

II. Target Audience: EM1 Residents

III. Learning Objectives or Assessment Objectives

A. Primary
1. Practice approach to the pt with AMS of unknown cause.
2. Management of medication overdoses
3. Procedure Skills: BVM, RSI

B. Secondary
1. Discuss contraindications for Romazicon-reversal of BZD induced respiratory depression

C. Critical actions checklist (see attached form for details):
1. IV, O2, monitor
2. Asks for core temperature
3. Gets med bottle from EMS
4. "coma cocktail" – narcan, accucheck, thiamine
5. Works pt up for co-ingestions
6. Identifies contraindication to Romazicon
7. Intubates pt for airway protection and ventilation
8. Activated charcoal per NG
9. Admits pt to ICU

IV. Environment

A. Lab Set Up – ED room
B. Manikin Set Up – ECS no moulage
C. Props – Medication bottle (Ativan 1mg #60 dated "yesterday")
D. Distractors – none
E. Equipment – standard airway

V. Actors

A. Roles –

V. EMS – provides scene description, med bottle if asked

VI. Intensivist – Suggests Romazicon to get pt extubated and therefore to Intermediate floor

VI. Case Narrative

A. Scenario Background Given to Participants (see Stimuli)
- CC: Unresponsive
- HPI: Landlord entered apartment and found pt (rent was overdue by 2 months)
- PMH: Unknown
- Meds: Ativan 1mg q4-6h **(only if got bottle from EMS)**

- Family History: Unknown
- Social History: EtOH, tobacco (per landlord)

B. Scenario Conditions Initially
   - Patient initial exam:
     - ✓ Respiratory depression – rate 6-8
     - ✓ GCS E1+M4+V1 = 6
     - ✓ SaO2 90-92% on room air.
     - ✓ Hypotensive
   - Patient pathophysiology
     - ✓ BZD overdose – respiratory depression, hypotension
     - ✓ Chronic EtOH and BZD use

C. Scenario Branch Points
   - If not intubated for airway protection –will go into respiratory arrest
   - If Romazicon given – will seize

VIII. Instructors Notes

A. Tips to keep scenario flowing:
   - Prompt to secure airway by having pt vomit
   - If workup inadequate, RN prompt – “what do you think is going on?”

B. Actors:
   - EMS: Provide scene info
   - Intensivist: May suggest Romazicon so pt doesn’t need ICU anymore (can be extubated).

C. Stimuli available:
   - EKG: Sinus Tach
   - CXR: normal
   - Head CT: normal
   - UDS: pos for BZD, rest negative
   - CMP: No anion gap (so no need to send Osmoles)
   - CBC, CIEs: normal
   - ABG: Uncompensated respiratory acidosis

D. Scenario programming
   1. Optimal management path (see evaluation checklist)
   2. Potential complications:
      a. Esophageal intubation
   3. Potential errors path(s)
      a. Not securing airway
      b. Giving Romazicon

4. Program debugging
   a. Use fluid infusions/losses to manipulate BP
   b. Use shunt fraction to manipulate SaO2

IX. Debriefing Plan

A. Method for debriefing
   - Videotape of case for later review with preceptor
   - Group debriefing of critical actions, play of the case (ideal vs. actual)

B. Actual debriefing materials:
   - Resident checklist – review with individual and group
   - Article on Flumazenil-induced seizures

C. Rules for the debriefing:
   - Debriefing after clinical conclusion of case
   - Ask participant for self-evaluation first
   - Solicit group assessment
   - Video provided to participant later for review with preceptor

D. Facilitated discussion of clinical case (see questions)

E. Questions to facilitate the debriefing
   - Review consistent approach to the pt with AMS
   - Review indications for intubation in this patient (respiratory depression, GCS <8)
   - What medications can you give for seizures induced by Romazicon?
   - What co-ingestion puts the pt at highest risk for Romazicon –induced seizures? (TCAs)

X. Pilot Testing and Revisions

A. Numbers of participants: 2-3 (1 primary, 2 support)
B. Evaluation forms - for and by participants

XI. Authors and their affiliations

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XII. Resources and References

Gueye PN, et al: Empiric use of flumazenil in comatose patients: Limited applicability of criteria to define low risk. *Ann Emerg Med* June 1996;27:730-735.