Eclampsia Simulation
Scenario Overview

SCENARIO OVERVIEW
Name of Scenario: Eclampsia
Target Trainees: MDs, RNs, CNMs, PAs
Anticipated Duration: 10 min

PATIENT DESCRIPTION:
41 yo G1 Po at 38 weeks comes to triage complaining of headache. Patient is in a gown, sitting on a bed, no monitors attached, holding head. Blood Pressure 140/90, reassuring fetal status, 4 cm dilated. Patient seizes during initial evaluation.

HISTORY:
Prenatal care has been uncomplicated. BP elevations during the last 2 visits.
Medical — healthy
Surgical — none
Social — non-contributory

BASELINE LAB VALUES:
N/A

LEARNING OBJECTIVES
COGNITIVE:
Patient assessment (relevant history, symptoms, fetal well being, Vital Signs, preeclampsia labs)
Emergency recognition
Eclampsia management (awareness of appropriate medication administration with correct dose/route/timing)
Assessment of fetal well being
Delivery plan formulation

TECHNICAL:
Patient positioning
Oxygen request and administration

BEHAVIORAL:
SBAR communication
Demonstrates leadership and followership
Calls for appropriate assistance
Uses closed loop communication
**Safe Motherhood Initiative**

**SCENARIO SET-UP**

**ROOM CONFIGURATION:**
Evaluation Unit

**EQUIPMENT:**
Exam table or Labor bed
IV pole, IV tubing, IV bag
Opsites
Covered needles
Magnesium sulfate premixed bag
Magnesium sulfate 1 gm 50% ampoule
Syringes with labels for Valium, Ativan, Phenytoin
Lab tubes for CBC, chem., Lft, uric acid, type and screen
Foley
Oxygen tank
Oxygen facemask
Pulse oximeter
Blood pressure cuff

**MANIKIN/TASK TRAINER PREPARATIONS:**
Pregnancy pillow
Seizure activity for 2-4 minutes
Postictal state for the remainder

**PRESETS:**
Control of vital signs monitor and fetal heart rate monitor (NOELLE monitor preset)

**SIMULATOR:**
A standardized patient actor

**Patient Monitor:**
Display of simulated maternal vital signs and fetal heart rate monitoring (NOELLE)

**Equipment set up:**
Routine NOELLE monitors set up

**MISCELLANEOUS:**

**CHART CONTENTS:**

**DEMONSTRATION ITEMS NEEDED IN DEBRIEFING ROOM:**
SCENARIO LOGISTICS

EXPECTED INTERVENTIONS:
Initial problem–oriented history acquisition
Fetal heart rate monitoring placement
Request for VS, IV, Foley, labs
Request for Help
Lateral positioning
Oxygen administration
Request for magnesium sulfate administration with dose/route/time of bolus and maintenance
Delivery plan formulation

LIKELY PROGRESSION:
Seizure until administration of magnesium sulfate
Postictal state with fetal heart rate deceleration for 5 minutes
Maternal stabilization with progression to delivery

EXPECTED ENDPOINT:
Stable maternal status
Vaginal delivery for fetus

DISTRACTERS:
Offer to administer 6 gm concentrated magnesium sulfate (1 gm vial, 50%) IV by confederate (inexperienced RN)

ADDITIONAL/OPTIONAL CHALLENGES:
Questioning delivery plan in anticipation of bradycardia and unstable or stable maternal condition by confederate (inexperienced RN)

VIDEOTAPE GUIDELINES
(Priorities to capture on videotape)

Confederate Roles
Inexperienced RN:
— Calls in RN for help in evaluation of a triage patient
— Asks to explain every step — why, what, how much, over how long if information is not volunteered by RN/MD
— Offers undiluted magnesium sulfate IV (show the vial) before getting premixed bag
— Asks for exact IV, IM magnesium dosing/route/timing if not offered
— Asks about delivery plan in anticipation of continuing bradycardia and stable versus unstable maternal signs

Trainee Roles
Labor and delivery Evaluation Unit Nurse Delivering provider (MD, PA, CNM)
Debriefing Points
(Based on Eclampsia Drill Score Sheet)

COGNITIVE:
Patient assessment
Recognition
Eclampsia management
Fetal assessment
Delivery plan

TECHNICAL:
Medication administration
Oxygen administration
Positioning

BEHAVIORAL:
Help request
Team communication: SBAR
Situation: expression urgency when called for help
Background: conveys relevant information only
Assessment: states problem without prompt
Requests: states clear, concise requests without prompt
Closed loop communication

Multiple Choice Questions
Eclampsia Drill Score Sheet

Reference List:
Birch L, Jones N, Doyle PM, Green P, McLaughlin A, Champney C, Williams D, Gibbon K, Taylor K.
“Obstetric skills drills: evaluation of teaching methods.”

Ellis D, Crofts JF, Hunt LP, Read M, Fox R, James M.
“Hospital, simulation center, and teamwork training for eclampsia management: a randomized controlled trial.”