Severe Preeclampsia and Eclampsia in LDR v2.0 SimMan3G

Part 1 – General Information

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Scenario
SimMan3G – LDR Severe Preeclampsia & Eclampsia v2.0 (Labor/Delivery/Recovery)

Scenario Time
15-20 minutes

Debriefing Time
20-45 minutes – longer if used as 1st scenario and requires more time to discuss non-technical skills (teamwork, communication, etc.) and CMQCC guidelines

Target Group
L&D nurses, OB physicians, Anesthesiologists, CRNA’s, & scrub techs.

Case Summary
This is a case of a patient on L&D who is being induced for mild preeclampsia. The patient develops severe preeclampsia and eclampsia that requires anti-hypertensive treatment as well as additional magnesium to control seizures. Despite maximal magnesium therapy, the patient continues to seize and the patient will require additional medications to control her seizures. In addition, the patient’s SpO2 will fall due to airway occlusion during/after the seizure. Simple repositioning of the head and opening the airway will restore SpO2. No intubation is required, but this could be required, if desired. This case is designed to ensure staff are following ACOG & CMQCC guidelines for appropriate treatment of preeclampsia and eclampsia. Therefore, there is a great emphasis on appropriate medication dosing and timing per these guidelines.

It is critical that the participants recognize the patient is seizing. Unfortunately, the effectiveness of the SimMan3G seizure feature is limited, so confederate may be required to point out the seizure if the team does not recognize this. Fetal monitoring simulators can also be used, however, a non-reassuring fetal heart tracing may prompt the treatment team to move the patient to the OR before the patient has received appropriate treatment for eclampsia and is stable for urgent c-section.

Teaching Personnel
1. GUI operator
2. Observer to note team communication and medical management skills – will serve as lead debriefer
3. Family member to voice observation of seizure signs if staff doesn’t recognize seizure (essential if using SimMan Classic and SimMan3G)
4. OB physician for clinical expertise if the lead debriefer is not OB
5. Voice of patient – could be GUI operator

Participants
1. 1-2 OB Physicians
2. 2-4 L&D nurses – varies depending on usual staffing on your unit
3. 1 CNM
4. Anesthesiologist and/or CRNA

Learning Objectives
1. Demonstrate effective teamwork and communication skills with a focus on adequate shared mental model and role clarity. This includes clear identification of all team members and SBAR to new team members as they arrive.
2. Diagnose severe preeclampsia
3. Treat hypertension per CMQCC Preeclampsia/Eclampsia guidelines
4. Provide appropriate initial management of eclamptic seizures with magnesium
5. Manage eclamptic seizures when magnesium is ineffective
6. Maintain airway and oxygenation in seizing and post-ictal patient

References