


Neonatal Meningitis/encephalitis and Seizures

	Coastal Simulation Program Scenario Name:	
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<p>Learning Objectives: By the end of the debriefing the participants should be able to:</p> <p><i>Knowledge & Skills:</i>- antibiotics/antivirals for neonatal meningitis/encephalitis</p> <ul style="list-style-type: none"> - airway management for an apneic neonate - DOPE pneumonic for an intubated patient - anticonvulsants for neonatal seizures <p><i>Attitudes and Judgement:</i> <i>Patient Safety:</i></p>	
<p>Patient Description: Name: Baby Boy Age: 3 weeks Weight: 4.1 kg Immunizations: nil <i>Hx of current condition:</i> poor breast feeding for 24 hours, fever today, hard to wake up today</p> <p>Social Hx: lives with mom and dad, no social concerns</p> <p>Diagnosis: meningitis/encephalitis</p>	<p>Skills required prior to simulation/learner assessment:</p> <p>Psychomotor: - IV /IO</p> <ul style="list-style-type: none"> - IPPV by bag and mask or advanced airway <p>Cognitive: - treatment for meningitis/encephalitis</p> <ul style="list-style-type: none"> - need to take over the airway - DOPE pneumonic - anticonvulsants <p>Teamwork: - multiple jobs to be done at the same time</p> <p>Who are my learners? - nurses, residents, pediatricians, respiratory therapists</p>
<p>Monitors: 3 lead cardiorespiratory monitor, O2 saturation monitor</p>	
<p>Physical Props/Equipment: IV and IO needles</p>	<p>References, Resources, Protocols, Algorithms, or Evidence Informed Practice Guidelines:</p> <ul style="list-style-type: none"> •

Equipment available in room:				
Room set up:	Medications & Fluids: N/S, D10W 2 IV's/IO's	Diagnostics: CBC, electrolytes, urea, creatinine CRP, glucometer	Documentation forms:	Confederates mom
Mannequin: SIM baby				
Personnel: - nurses, RT's, resident, pediatrician				

Scenario Transitions / Patient Parameters	Effective Management	Consequences of Ineffective Management	Notes
phase 1 Setting: - pediatric floor			
HR 160, RR 30, T 39.0, BP 75/45 O2 sats 95% on R/A, sinus rhytm <ul style="list-style-type: none"> - irritable cry when stimulated, hypotonic and shallow respirations when not stimulated - no eye opening - pink, normal perfusion - full fontnelle - no focal neurologic findings 	<ul style="list-style-type: none"> - monitors - IV access - bloodwork, consider LP - antibiotics - prepare for airway management as the baby has shallow respirations 		<ul style="list-style-type: none"> - consider CBC, blood culture, glucometer, electrolytes, urea, creatinine - successful peripheral IV - amp/gent or amp/cefotaxime and acyclovir

phase 2			
<ul style="list-style-type: none"> - seizure - HR 160, RR 10, O2 sats 60% on R/A, 75 % on 100% O2, BP 75/45 - with successful IPPV HR 160, O2 sats 92% on R/A, O2 sats 98% with 30 % O2 	<ul style="list-style-type: none"> - anticonvulsants - IPPV by bag and mask or advanced airway - consider 2nd IV access 	<ul style="list-style-type: none"> - if poor IPPV, RR 0 and HR 40 and O2 sats stay at 60 % regardless of O2 - ongoing seizure if no anticonvulsants 	<ul style="list-style-type: none"> - phenobarb, dilantin, consider benzodiazipine - consider RSI - if 2nd IV access requested, peripheral IV unsuccessful and need to do IO
phase 3			
<ul style="list-style-type: none"> - seizure stops after 5 minutes of starting anticonvulsant administration - HR 160, RR 0, BP 75/45, O2 sats 92% on R/A, 98% on 30% O2 	<ul style="list-style-type: none"> - continue IPPV 	<ul style="list-style-type: none"> - if poor IPPV O2 sats keep decreasing to 70% 	
phase 4			
<ul style="list-style-type: none"> - obstruction of ET tube causing O2 sats to drop suddenly to 70% - HR 160, RR 0, BP 75/45 - O2 sats 98% was ETT is suctioned 	<ul style="list-style-type: none"> - suction (consider DOPE pneumatic) 		<ul style="list-style-type: none"> - phase 4 is optional

<p>Possible debrief points:</p> <ul style="list-style-type: none">- meningitis/encephalitis management- IPPV- seizure management- RSI- DOPE mnemonic- communication	<p>Debrief notes</p> <p>antibiotics/antivirals</p> <p>IPPV</p> <p>anticonvulsants</p> <p>DOPE mnemonic</p> <p>communication</p> <p>other</p>
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