

IM5 (Pediatrics) Critical Thinking Worksheet

Patient Age: 3years old

Patient Weight: 18.3 kg

Student Name: Ashlyn Lutrick	Unit: PICU Pt. Initials: EH	Date: 5/31/22
<p>1. Disease Process & Brief Pathophysiology (Identify Key Concepts to Your Patient and Include Reference):</p> <p>Traumatic brain injury affects all brain cells, including neurons; glial cells such as astrocytes, microglia, and oligodendrocytes; blood vessel cells; and cells that produce and recycle cerebrospinal fluid (CSF), which line the brain's ventricles. In addition to causing direct cell damage and cell loss, brain injuries disrupt blood flow and the blood-brain barrier (a barrier that allows only selective molecules to pass from the bloodstream and come in contact with neurons and astroglial cells). Brain injury affects neuronal circuitry by causing the death of neurons and glial cells and destroying connections between them. This includes the cellular extensions (dendrites and axons) through which neurons receive and emit signals by means of molecules called neurotransmitters.</p>	<p>2. Factors for the Development of the Disease/Acute Illness:</p> <ul style="list-style-type: none"> - Falls - Vehicle related collision - Violence (P), due to a gunshot wound to the head - Sport injuries - explosive blasts or other combat injuries - Children, especially newborns to 4-year-olds (P) - Young adults, especially those between ages 15 and 24 - Adults age 60 and older - Males in any age group (P) 	<p>3. Signs and Symptoms:</p> <ul style="list-style-type: none"> - Change in eating or nursing habits - Unusual or easy irritability(P) - Persistent crying and inability to be consoled - Change in ability to pay attention(P) - Change in sleep habits(P) - Seizures - Sad or depressed mood - Drowsiness(P) - Loss of interest in favorite toys or activities

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4. Diagnostic Tests Pertinent or Confirming of Diagnosis: <ul style="list-style-type: none"> - Glasgow coma scale - CT scan (P) - MRI - Information on injury and symptoms (P) - Intracranial pressure monitor (P) 	5. Lab Values That May Be Affected: <ul style="list-style-type: none"> - RBC (P) - Hematocrit (P) - Sodium - Magnesium 	6. Current Treatment (Include Procedures): <ul style="list-style-type: none"> - EVD (P) - Anti- Seizure meds(P) - Diuretics - Antibiotics(P) - Coma induced drugs - Removal of right and left bone flaps (P) - Brain surgery (repair and taking out some of the brain) (P) - Removal of hematomas - Repairing skull fracture - Repair bleeding in brain (P) - OT(P) - PT(P) - Hospitalists(P) - Nutritionist(P) - Neurologist(P) - Social worker and case management (P)

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		<ul style="list-style-type: none"> - CPS(P) - Psychiatrist - Speech and language therapist - Rehabilitation nurse - Traumatic brain injury nurse specialist - Recreational therapist - Vocational counselor

References:

Pekna, M., & Pekny, M. (2012, July). *The Neurobiology of Brain Injury*. Cerebrum : the Dana forum on brain science. Retrieved May 31, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3574788/>

Mayo Foundation for Medical Education and Research. (2021, February 4). *Traumatic brain injury*. Mayo Clinic. Retrieved May 31, 2022, from <https://www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/diagnosis-treatment/drc-20378561>

