Pediatric Traumatic Brain Injury

By Cathryn Palagyi, Arabella Escobedo, Abbi Foote, & Melisa Fahey

Student Developed Simulation Scenario Storyboard	
Identified Problem/Scenario **Topic:** Traumatic Brain Injury (TBI) in a 3-month-old following a Fall **Related Resources:** Pediatric Glasgow Coma Scale CDC Pediatric Head Injury Guidelines ATI Pediatric Nursing (2023) National Institute of Neurological Disorders and Stroke (NINDS)	**Scenario Key Points:** ● Infant fell from a couch at home ● Presents with vomiting, irritability, and decreased responsiveness ● Bulging fontanelle and unequal pupils noted ● CT scan pending; suspected intracranial injury ● Parents are anxious and unsure how the fall occurred
Case Summary: A 3-month-old male infant was brought to the ED after falling from a couch onto a hardwood floor. The mother reports the infant rolled unexpectedly. Since the incident, the infant has vomited twice, is irritable, and less responsive. Assessment reveals a bulging fontanelle, unequal pupils, and a high-pitched cry. Vital signs show bradycardia and elevated blood pressure. A CT scan is ordered. The infant is admitted for neuro monitoring and supportive care.	**Expected Interventions of Students: (Minimum of 5 required.)** ● Perform frequent neuro assessments using Pediatric Glasgow Coma Scale ● Elevate head of bed to 30° and maintain head midline ● Monitor for signs of increased intracranial pressure (Cushing's triad) ● Administer acetaminophen using FLACC scale for pain assessment ● Educate and emotionally support parents ● Maintain NPO status and initiate IV fluids ● Prepare for seizure precautions (suction, emergency meds) ● Document all assessments and interventions thoroughly
Supplies: ● Pediatric crash cart ● Suction setup ● Oxygen delivery system ● IV start kit and fluids ● Neurological assessment tools ● FLACC pain scale chart ● Pediatric medication supplies	
Medications: (Include drug name, dosage, route, and concentration for scenario) ● Acetaminophen: 80mg q4-6h PRN, PO/PR, 160 mg/mL ● Lorazepam: 0.05 mg/kg PRN, IV, 2 mg/mL ● NS 0.9%NaCl: 10mL/kg bolus, IV, isotonic solution ● Odansetron: 0.1 mg/kg q8h PRN, IV, 2 mg/mL	**Support Person:** (Only complete if you want a support person) **Who is the person to the patient?** Mother **Questions/Responses for Support Person:** **Mom:** "Will my baby be okay?" **Nurse:** "We're monitoring your baby closely and taking every step to ensure safety and recovery." **Mom:** "How did this happen?" **Nurse:** "Infants begin rolling around this age. We'll help you learn safety strategies to prevent future injuries."

NCLEX Questions

I. Which of the following findings indicates increased intracranial pressure in a 3-month-old infant?
- A. Soft, flat fontanelle
- B. High-pitched cry
- C. Regular Respirations
- D. Warm Extremities

Answer: B
Rationale: A high-pitched cry is a classic sign of increased ICP in infants, along with bulging fontanelle and irritability.

II. What is the priority nursing action for an infant with suspected TBI and vomiting?

- A. Administer oral fluids
- B. Place infant in prone position
- C. Maintain NPO and initiate IV fluids
- D. Encourage breast feeding

Answer: C.
Rationale: Vomiting increases aspiration risk. NPO status with IV fluids ensures hydration and airway protection.

Debriefing Questions:
1. **What signs and symptoms helped you identify increased intracranial pressure in this patient?**

2. **How did you support the parent emotionally while maintaining clinical priorities?**

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Case Flow (15-20 Minute Simulation Time)

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...ent statements:

Signs				R		P		O2		in		S	
...iac													
...piratory													
...o													
...r													

...ent changes during scenario:													

...ent statements:

Signs				R		P		O2		in		S	
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Patient rs	

| of Scenario: | | | | | | | | | | |

ent statements:

Signs				R		P		O2		in		S	
iac													
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Patient Report:

Additional information, Medical History:

Patient data:

DOB:

MR#:

Prior medical history:

Allergies:

Social history:

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Physician's Orders

NAME: _____ SIGNED	STATUS:
DATE ORD: XX/XX/XX _____	ROOM:
ORD PHYS: _____ _____	MR#
ATTENDING: _____ _____	DOB:
AGE:___years old XX/XX/XX	DATE:

Date/Time	
XX/XX/XX	Admit to _____
	Diagnosis: _____
	VS every _____

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	Activity:_____
	Diet:_____
	I&O
	IV:_____
	Medications:_____
	Other:_____
	Dr. _____

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Start	Medication	Time	TODAY
Stop			XX/XX/XXXX

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XX/XX/XXXX	**Name Route How Often** Trade: _____	_____	
XX/XX/XXXX	Administer: _____		
Active Acknowledged			
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LABORATORY

NAME: _____ SIGNED	STATUS:
DATE ORD: XX/XX/XX _____	ROOM:
ORD PHYS: _____ _____	MR#
ATTENDING: _____ _____	DOB:
AGE:___years old XX/XX/XX	DATE:

HGB/HCT	XX/XX/XX Admission	Reference Range
HGB		
HCT		

CMP	XX/XX/XX Admission	Reference Range
Na		
CL		

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K		
BUN		
Creatinine		
Blood Glucose		
Blood pH		

URINALYSIS	XX/XX/XX Admission	Reference Range
pH		
Specific Gravity		
Glucose		
Protein		
Blood		
Ketones		
Nitrite		
Leukocyte esterase		
Clarity		
Color		

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IMAGING DEPARTMENT

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NAME: _____   STATUS:
SIGNED

DATE ORD: XX/XX/XX   ROOM:
_____

ORD PHYS: _____   MR#
_____

ATTENDING: _____   DOB:
_____

AGE:___years old   DATE: XX/XX/XX

CLINICAL DATA/Reason for Test:

X-ray:

IMPRESSION:

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References

ATI Nursing Education. (2023). *Pediatric Nursing Review Module*. Assessment Technologies Institute.

Centers for Disease Control and Prevention. (2023). *Pediatric traumatic brain injury guidelines*. https://www.cdc.gov/traumaticbraininjury

 Hockenberry, M. J., & Wilson, D. (2022). *Wong's essentials of pediatric nursing* (11th ed.). Elsevier.

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