Medications

- ondansetron
  - Pharmacologic class- selective serotonin receptor antagonist (Jones & Bartlett Learning, 2022)
  - Therapeutic class-antiemetic (Jones & Bartlett Learning, 2022)
  - The patient is taking this medication to help relieve his nausea and vomiting.
  - Assess the patient's nausea and vomiting before administration.
  - Check patient allergies before administration
  - The safe dosage for this child is 0.1mg/kg. The patient is receiving 1.8 mg. This is a safe dose (Jones & Bartlett Learning, 2022).
- acetaminophen
  - Pharmacologic class- nonsalicylate, para-aminophenol derivative (Jones & Bartlett Learning, 2022)
  - Therapeutic class-antipyretic, nonopioid analgesic (Jones & Bartlett Learning, 2022)
  - The patient is taking this medication to help relieve pain from his concussion.
  - The nurse should check the patient's pain level before administration.
  - The safe dose for this child is 240 mg every 4 hours as needed. This patient is ordered to take 260 mg every 4 hours as needed. This dose is not safe and is too high (Jones & Bartlett Learning, 2022).
- D5 0.9% normal saline
  - The patient should receive 1,425 mL of fluid a day to reach his amount for his weight. The normal saline is at 28 mL/hr. This does not exceed the range, so this is a safe dose (Jones & Bartlett Learning, 2022).

Demographic Data

Admitting diagnosis: head trauma/concussion

Age of client: 6 years

Sex: male

Weight in kgs: 18.5 kg

Allergies: NKA

Date of admission: 10/3/2024

Psychosocial Developmental Stage: initiative vs. guilt

Cognitive Development Stage: preoperational stage

Admission History

A 6-year-old patient came into the emergency department on 10/3/2024 due to a head trauma. The patient stated he was playing at school and hit his head on concrete when he fell. The patient went to see the school nurse and was having nausea and vomiting upon palpation. The patient stated he feels tired and has a headache. There is a hematoma on left, frontal head and bruising on his left knee.

Pathophysiology

Disease process: Concussions in my patient's scenario was caused by a direct, strong contact to the head. This causes a strain in the brain tissue (Capriotti & Frizzell, 2020). The strain then causes metabolic changes in the extracellular space (Capriotti & Frizzell, 2020). Sodium and water will build up in the extracellular space and cause swelling (Capriotti & Frizzell, 2020). This builds up pressure in the head and causes the concussion (Capriotti & Frizzell, 2020).

S/S of disease: There are many signs and symptoms that are associated when a person receives a concussion. These include a headache, confusion, being in a "daze", amnesia, memory loss, vomiting, intracranial pressure, fatigue, and concentration difficulties (Capriotti & Frizzell, 2020)

Method of Diagnosis: The patient should have a complete neurological assessment (Capriotti & Frizzell, 2020). The patient should also be asked questions to assess their memory and brain processing (Capriotti & Frizzell, 2020). A CT scan can be completed to see further damage (Capriotti & Frizzell, 2020).

Treatment of disease: When a patient is being treated for a concussion it is important that they receive rest (Capriotti & Frizzell, 2020). The patient should not do any extraneous activities or hard work for at least a week following the concussion (Cite).

Relevant Lab Values/Diagnostics

- No Lab Values
- CAT scan of head on 10/3/2024
  - No acute intracranial hemorrhage
  - No other acute intracranial CT findings
  - This was completed to make sure that there were not any severe brain injuries that occurred when the patient fell.

Medical History

Previous Medical History: N/A

Prior Hospitalizations: N/A

Past Surgical History: N/A

Social needs: head trauma prevention education; patient is not allowed to do any extraneous activities or participate in gym class for one week; educate the patient and guardian on signs of head abnormalities

Active Orders

1.Seizure Precautions-These are set for the patient because they are at an increased risk for seizures due to their concussion (Rudd & Kocisko, 2023). This will help provide safety incase of a seizure.

2.regular diet-The patient does not need a specific diet. The patient can order whatever food they want. This is relevant so the patient has a good caloric intake.

3. vital signs every 4 hours- This is to assess the child's basic functions. This is also to monitor the patient for signs of pain.

4. neurology checks every 4 hours-This is relevant for the patient to check for any signs of neurological abnormalities. The patient experienced a head trauma, so the provider wants to make sure there are not any severe complications.

5. Oxygen saturation above 92%- This relevant to assess the child's basic functions.

Assessment	
General	Patient is alert, oriented, happy, and active
Integument	Patient has a scratch on his left knee that is covered with a band aid; no rashes or abnormalities; patient's skin color is appropriate for ethnicity
HEENT	Patient has a hematoma on left side of the frontal bone from his fall; patient has no other abnormalities of the head; no drainage or abnormalities with ears, eyes, and nose; patient's eye vision is demonstrated by him looking at the nurse and I; the patient's hearing is intact as evidenced by him answering my questions
Cardiovascular	S1 and S2 heard; regular pulse and heart rate; no heart murmurs
Respiratory	Lung sounds clear and equal bilaterally, no accessory muscle use, no adventitious sounds
Genitourinary	No abnormalities, patient did not complain of pain during urination; patient urinated twice during my clinical
Gastrointestinal	Bowel sounds active in all four quadrants
Musculoskeletal	Moves all extremities; eager to get up to move and play; no complaints of pain with movement; full range of motion in all extremities
Neurological	Alert, active, oriented; capillary refill less than 3 seconds; pulses all palpable; skin is warm to touch
Most recent VS (highlight if abnormal)	**Time:** 1130 **Temperature:** 36.8 degrees Celsius **Route:** auxiliary **RR:** 22 **HR:** 84 **BP and MAP:** 110/84 **Oxygen saturation:** 100% **Oxygen needs:** room air

Pain and Pain Scale Used	0; Faces pain scale

Nursing Diagnosis 1 Risk for acute confusion related to head trauma as evidenced by disorientation.	**Nursing Diagnosis 2** Risk for impaired mobility related to dizziness as evidenced by unsteadiness.	**Nursing Diagnosis 3** Risk for fluid volume deficit related to nausea and vomiting as evidenced by hypotension and tachycardia.
Rationale This nursing diagnosis is important because it is showing a complication of a concussion. A nurse would want to assess this if this is occurring long after a concussion. Confusion should only occur for a little while after the concussion (Capriotti & Frizzell, 2020).	**Rationale** This nursing diagnosis is important because we want to decrease the amount of injury for a patient as much as possible. If the patient is going to experience dizziness, we want to implement interventions to prevent and more pain.	**Rationale** This nursing diagnosis is important due to the many complications that fluid volume deficit can cause. If fluid volume deficit occurs and is not treated or recognized quickly, the patient could experience severe complications such as shock (Capriotti & Frizzell, 2020).
Interventions **Intervention 1:** Complete neurology checks every 4 hours **Intervention 2:** Educate guardians on when to contact provider if patient is away from baseline	**Interventions** **Intervention 1:** Educate the patient on changing positions slowly to avoid dizziness **Intervention 2:** Educate the patient and guardian on avoiding strenuous activity for a week	**Interventions** **Intervention 1:** Complete vital signs every 4 hours **Intervention 2:** Encourage fluid intake
Evaluation of Interventions After these interventions are implemented, the nurse should be able to detect if there is a neurological abnormality as soon as possible.	**Evaluation of Interventions** After these interventions are completed, the patient should be aware of the dizziness that they could receive. The patient will not follow or have any serious injuries after the proper education.	**Evaluation of Interventions** After these vital signs are implemented, the nurse will be able to detect if there is a fluid deficit by the vital signs. Once the patient is encouraged to increase their fluid intake, this will prevent the risk of fluid volume deficit.

References (3):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Jones & Bartlett Learning. (2022). *2023 Nurse's drug handbook* (22nd ed.). Jones & Bartlett Learning.

Rudd, K. & Kocisko, D.M. (2023). *Davis advantage for pediatric nursing: Critical components of nursing care* (3rd ed.). F.A. Davis