Medications

Medication: Acetaminophen 160 mg/5 mL (15 mg x 31.2 kg) Oral every 4 hours PRN
Acetaminophen 325 mg (15 mg x 31.2 kg) Rectal every 4 hours PRN
Therapeutic class: Antipyretics, nonopioid analgesics
Reason for client taking: Mild to moderate pain and fever.
Key nursing assessments: Assess pain type, location, and intensity prior to and during therapy. Ensure the medication does not interact with any preexisting medications. (Vallerand & Sanoski, 2021).
Medication: Ketorolac injection 15 mg IV push every 6 hours PRN for moderate pain
Therapeutic class: Nonsteroidal anti-inflammatory agents, nonopioid analgesics
Pharmacological class: pyrazoline carboxylic acid
Reason for client taking: Mild to moderate pain (4-6/10)
Key nursing assessments: Assess pain type, location, and intensity prior to and during therapy. Assess for rhinitis and asthma as they are at an increased risk for hypersensitivity reactions (Vallerand & Sanoski, 2021).

Demographic Data

Admitting diagnosis: Bilateral pulmonary contusions
Age of client: 8 years old
Sex: Male
Weight in kgs: 44.6 kg
Allergies: No known allergies
Date of admission: 09/05/2022
Psychosocial Developmental Stage: Industry vs. Inferiority
Cognitive Development Stage: Concrete operational stage

Admission History

Eight-year-old male presented to the emergency room with no past medical history or surgical history on 9/5/22 after a go cart accident. Patient was racing a friend when his friend crashed into him, and the go cart rolled on top of him. The patient was not wearing a helmet or a seatbelt. Denies loss of consciousness but states he "took a nap for a minute." Reports pain in back when breathing and left-hand pain.

Pathophysiology

Disease process: "A pulmonary contusion causes injury to the lung parenchymal, leading to disruption of alveoli and capillaries, resulting in leakage of blood and other interstitial fluids across the alveolar-capillary membrane into lung tissue and alveolar space" (Choudhary et al, 2022). Fluid in the alveolar space leads to edema which can cause alveolar collapse and atelectasis. If the lungs are impaired, oxygenated air cannot enter the alveoli during inspiration. A decrease in oxygenation causes vasoconstriction, decreased perfusion, which results in hypoxemia and hypercapnia (Choudhary et al, 2022).

S/S of disease: Signs and symptoms of pulmonary contusions are; rapid breathing, tachycardia, dyspnea, coughing, pain when breathing, blood clots, excess bronchia fluid, wheezing, hypotension, and bluish skin (Choudhary et al, 2022).

Method of Diagnosis: Pulmonary contusions are diagnosed by a chest x-ray, CT scan of the chest, or ultrasounds (Choudhary et al, 2022). The patient was diagnosed by. CT scan of the chest because CT scans can detect pulmonary contusions immediately after trauma.

Treatment of disease: In mild cases of pulmonary contusions, postural drainage, suctioning, chest physiotherapy, incentive spirometry, coughing, deep breathing, and rest are common treatments (Choudhary et al, 2022). In more serious cases of pulmonary contusions, surgery may be required to fix broken ribs or correction of a flail chest (Choudhary et al, 2022).

Assessment	
General	Patient is A&Ox4. Oriented to person, place, date, and time. Patient shows no signs of distress. Patient is well groomed, maintains personal hygiene.
Integument	Skin color is appropriate for ethnicity. Skin is pink, warm, dry and intact. The patient's temperature is 37.0 degrees Celsius. The patients skin turgor is elast… …e is not applicable and there are no …
	…t at home and at the hospital. The patient is 44.6 kg. Bowel sou… …t was this morning 9/5/22. There are no signs of distention, inci… …oft and non-tender. The patient does not have an ostomy bag, na…
Gastrointestinal	The patient's urine is clear and yellow with no foul odor. The patient voided multiple times this morning, but exact output was not recorded. Patient denies pain upon urination. They patient is not on dialysis and does not have a catheter. Genitals were not assessed.
Musculoskeletal	The patient shows active range of motion with strength equal bilaterally in upper and lower extremities. The patient can ambulate unassisted. No assistive devices necessary and fall score is not applicable.
Neurological	The patient can move all extremities equally. Eyes are equal, round, reactive, and accommodation to light. The patient is oriented to time, date, place, and situation. Speech is clear and A&Ox4.
Most recent VS (highlight if abnormal)	**Time:** 0800 **Temperature:** 98.5

Relevant Lab Values/Diagnostics

Patients results: CT scan of the chest shows opacities on lungs bilaterally confirming pulmonary contusion diagnosis.

Normal CT findings: Computerized tomography or a CT scan is a series of X-ray images to create cross-sectional images of bones, blood vessels, and soft tissue (Mayo Clinic, 2022). The lungs and airways are normal. No pleural effusion or thickening. Heart size is within normal limits. The mediastinum structures have normal configuration. Chest wall is unremarkable.

Medical History

Previous Medical History: N/A

Prior Hospitalizations: N/A

Past Surgical History: N/A

Social needs: Lives at home with grandparents, uncles, siblings, and three dogs. Nonsmoking home, alcohol, chemicals, and medications are locked away. Parents provide nutritious meals, promote physical activity, and limit sedentary lifestyle.

Active Orders

-Increase activity as tolerated.
-Incentive spirometry.

	Route: Oral **RR:** 18 **HR:** 89 beats per minute **BP and MAP:** 112/63 Map: 81 **Oxygen saturation:** 99% **Oxygen needs:** Room air
Pain and Pain Scale Used	Patient rated pain as a 0/10 on a numeric pain scale.

Nursing Diagnosis 1 Risk for impaired gas exchange related to bilateral pulmonary contusions as evidence by dyspnea.	**Nursing Diagnosis 2** Risk for bleeding related to Trauma as evidence by motor vehicle accident.	**Nursing Diagnosis 3** Deficient knowledge related to lack or exposure to information as evidence by grandfather expressing concern.
Rationale The nursing diagnosis was chosen because the patient was opacities on their lungs, dyspnea, and shortness of breath on exertion which may lead to impaired gas exchange.	**Rationale** The nursing diagnosis was chosen because the patient experienced trauma from a motor vehicle accident which increases their risk of bleeding. Early identification of bleeding provided a foundation for appropriate preventative measures.	**Rationale** The nursing diagnosis was chosen because the grandfather of the patient was asking questions and wanting to know about his grandson's health and recovery.
Interventions **Intervention 1:** Elevate head of bed above thirty degrees. **Intervention 2:** Promote turning, coughing, and deep breathing.	**Interventions** **Intervention 1:** Monitor hematocrit and hemoglobin levels. **Intervention 2:** Assess skin and mucous membranes for signs of petechiae, bruising, hematoma formation, or oozing of blood	**Interventions** **Intervention 1:** Review the pathology, prognosis, and future expectations of the patient. **Intervention 2:** Educate the caregiver on signs and symptoms to monitor for and when to seek medical attention.
Evaluation of Interventions The patient responded well to the nursing interventions and oxygen saturation remained	**Evaluation of Interventions** The patient responded well to the nursing interventions and showed no signs of bleeding.	**Evaluation of Interventions** The patient and family responded extremely well to the nursing diagnosis. The patient and

between 98-100%.		family were educated and gained knowledge on the patient's condition. The patient was successfully discharged home.

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