

## Medications

**Generic/Brand name:** Oxycodone/ Xtampza ER

**Dose:** 5 mg

**Route:** Oral

**Pharmacological class:** Opioid (Jones & Bartlett Learning, 2021, 1019).

**Therapeutic class:** Opioid analgesic (Jones & Bartlett Learning, 2021, 1019).

**Reason for taking:** Severe leg pain.

**Key assessment:** Assess pain level.

**Generic /Brand name:** Polyethylene glycol/ Miralax

**Dose:** 17 g

**Route:** Oral

**Pharmacological class:** Osmotic laxative (Sinha, 2023).

**Therapeutic class:** Osmotic laxative (Sinha, 2023).

**Reason for taking:** Constipation.

**Key assessment:** Assess if the patient has been having frequent bowel movements.

## Demographic Data

**Admitting diagnosis:** ATV Injury

**Age of client:** 13 years old

**Sex:** Male

**Weight in kgs:** 81.6 kg

**Allergies:** No known allergies

**Date of admission:** 10/14/2023

## Pathophysiology

**Disease process:** The two long lower leg bones are the tibia and fibula. The fibula is a smaller bone on the exterior, while the tibia is larger inside. The tibia is significantly thicker than the fibula. It is the one that carries the most weight of the two. The lower leg muscles, ankle, and fibula are all stabilized by the fibula, which also supports the tibia. This patient has a distal tibial fracture. This injury occurs at the ankle end of the tibia and goes transversely through the fibula. A tibia-fibula fracture is a severe injury that requires prompt immediate medical attention. With timely and proper treatment, a broken tibia-fibula can heal completely.

**S/S of disease:** A broken or fractured tibia-fibula can cause lower leg pain and swelling, difficulty standing or walking, limited range of motion in the knee or ankle, and bruising or discoloration of the skin surrounding the break (Cleveland Clinic, 2023).

**Method of Diagnosis:** The medical professional will perform a physical examination and order x-rays of the affected area to diagnose a tibia fibula fracture (Cleveland Clinic, 2023).

**Treatment of disease:** If the break is minor, a cast or splint may be all that is required. For more severe fractures, such as the one this patient suffers, an external fixation was necessary to realign the bones in his leg. To prevent the patient from moving his ankle, the surgeon realigned the bones, screwed and inserted pins into the bone, and attached them to a brace to help hold them in place while they heal. The patient's leg will be

## Admission History

J.H. is a 13-year-old that is healthy outside of his ATV incident. He was riding an ATV, lost control of the machine, and fell off, rolling onto his leg. He felt pain immediately and noted hearing a cracking sound. His mother brought him to the ER, where an x-ray was taken and showed a Tib/Fib fracture. The patient is seeing ortho and physical therapy.

### Relevant Lab Values/Diagnostics

**X-ray of the left lower leg** - Showed a non-displaced distal fibular fracture. There is also a distal tibial metaphyseal fracture, which extends through the physis with the widening of the anterior/medial physis.

**X-ray of the left lower leg** - Showed restored anatomic alignment at the distal fibular fracture.

### Medical History

**Previous Medical History:** The patient has a medical history significant for a small bowel obstruction (SBO).

**Prior Hospitalizations:** No previous hospitalizations.

**Past Surgical History:** The patient has a surgical history that includes hernia repair and small intestine surgery.

**Social needs:** All are healthy. Denies history of sick contacts within the family. The patient is developmentally normal and needs to make better choices that won't lead him to the hospital or the detention center.

### Active Orders

**Vital signs Q4h** - To make sure the patient remains stable.

**Pin care** - Cleaned daily with sterile water to prevent infection.

**Wound care/ dressing change** - To ensure the site stays dry, clean, and intact.

**Weight-bearing limitations** - To ensure the patient doesn't cause further injury to the leg.

**Elevate** - To prevent swelling in the leg and foot.

**Activity (increased as tolerated)** - To improve mobility but monitored because we don't want the patient putting weight on a fractured leg.

### Assessment

<b>General</b>	Awake, alert, and comfortable, sitting up in the bed, rods protruding from Left ankle, Left foot propped on pillows, no acute distress, cooperative.
<b>Integument</b>	Warm, no rashes, lesions, or petechiae, well perfused.
<b>HEENT</b>	Normocephalic, atraumatic, conjunctiva clear, normal mucosa, moist oral cavity, neck supple, full range of motion.
<b>Cardiovascular</b>	Respirations regular, S1/S2 present, no murmurs, good perfusion, pulses normal 2+, capillary refill less than 3 seconds.
<b>Respiratory</b>	Normal respiratory effort, clear to auscultation bilaterally.
<b>Genitourinary</b>	Urine yellow and clear, no pain with urinating, no blood, 600 mL output
<b>Gastrointestinal</b>	The abdomen is soft, non-tender, and non-distended without masses or organomegaly. Bowel sounds are active, external fixator on midfoot and pin in distal tibia.
<b>Musculoskeletal</b>	Left LE: Toes visible above compression dressing; they are warm, brisk capillary refill, able to move toes minimally, pin sites are dry, clean, and intact. All other extremities have a full range of motion
<b>Neurological</b>	Alert and oriented to person, place, and time. Normal muscle tone, cranial nerves grossly intact. No focal neurological deficit
<b>Most recent VS (highlight if abnormal)</b>	<p><b>Time:</b> 0815</p> <p><b>Temperature:</b> 36.7 (98.1)</p> <p><b>Route:</b> Oral</p> <p><b>RR:</b> 18</p> <p><b>HR:</b> 90</p> <p><b>BP and MAP:</b> 113/67, 85</p> <p><b>Oxygen saturation:</b> 99 (room air)</p> <p><b>Oxygen needs:</b> None</p>
<b>Pain and Pain</b>	Number scale (1-10), the patient rates pain at a two on the number scale

Scale Used	
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<p align="center"><b>Nursing Diagnosis 1</b></p> <p>Impaired skin integrity related to skin surface disruption as evidenced by external fixation pins.</p>	<p align="center"><b>Nursing Diagnosis 2</b></p> <p>Impaired walking related to musculoskeletal impairment as evidenced by surgical pinning of the distal tibia.</p>	<p align="center"><b>Nursing Diagnosis 3</b></p> <p>Risk for infection related to inadequate primary or secondary defense as evidenced by impaired skin integrity.</p>
<p align="center"><b>Rationale</b></p> <p>The patient has open reduction and external fixation.</p>	<p align="center"><b>Rationale</b></p> <p>The patient had surgery on his left leg, had pins put in, and is non-weight-bearing.</p>	<p align="center"><b>Rationale</b></p> <p>The patient has pins in his leg, increasing the infection risk.</p>
<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Inspect the site (Phelps, 2020).  <b>Intervention 2:</b> Change the patient's site position every 2 hours (Phelps, 2020).</p>	<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Instruct patient and family members in ambulation techniques (Phelps, 2020).  <b>Intervention 2:</b> Encourage attendance at physical therapy sessions and reinforce prescribed activities by using the same equipment, devices, and techniques used in therapy sessions (Phelps, 2020).</p>	<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Monitor and record temperature every four hours (Phelps, 2020).  <b>Intervention 2:</b> Perform hand hygiene before and after providing care (Phelps, 2020).</p>
<p align="center"><b>Evaluation of Interventions</b></p> <p>The patient will show no evidence of skin breakdown (Phelps, 2020).</p>	<p align="center"><b>Evaluation of Interventions</b></p> <p>The patient will achieve the highest ambulation possible (Phelps, 2020).</p>	<p align="center"><b>Evaluation of Interventions</b></p> <p>The patient will exhibit wounds and incisions that show no signs of infection (Phelps, 2020).</p>

		<b>What do you expect?</b>	<b>What did you observe?</b>
<b>Erickson's Psychosocial Developmental Stage</b>	Identity vs. Role Confusion	I expected there to be an importance placed on conformity to peer norms and peer acceptance.	He explained how he saw that someone had left an ATV on with the keys in it. He decided it would be cool and wanted to impress his peers, so he took it to show it. Later, he crashed the machine while he and another child were riding it, which is how he fractured his tibia/fibula.
<b>Piaget's Cognitive Developmental Stage</b>	Formal operations	Egocentric thinking	He is focused on himself and wants to control his care.
<b>Age-Appropriate Growth &amp; Development Milestones</b>	<ol style="list-style-type: none"> <li>1. Height increases (Ricci et al., 2020).</li> <li>2. Muscle mass increase (Ricci et al., 2020).</li> <li>3. Clumsier (Ricci et al., 2020).</li> </ol>		
<b>Age-Appropriate Diversional Activities</b>	<ol style="list-style-type: none"> <li>1. Talking with friends</li> <li>2. Play games on his phone</li> <li>3. Watching TV</li> </ol>		

### References (3):

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