

Nursing Case Studies

Management of acute exacerbation of chronic heart failure

Patient background

Mr. Johnson is a 65-year-old male with a history of chronic heart failure (CHF). He presents to the emergency department with complaints of worsening shortness of breath, fatigue, and lower extremity edema for the past two days. He reports non-compliance with his prescribed medications and dietary restrictions.

Assessment findings

- **Vital signs:** BP 160/90 mmHg, HR 110 bpm, RR 24 bpm, SpO2 88% on room air
- **Lung auscultation:** Bilateral crackles heard in lung bases
- **Lower extremity assessment:** 2+ pitting edema bilaterally
- **Lab results:** Elevated BNP levels, hyponatremia, hypokalemia

Nursing diagnoses

1. Impaired Gas Exchange related to fluid overload and decreased oxygenation.
2. Activity Intolerance related to decreased cardiac output and dyspnea.
3. Noncompliance with Medications related to lack of understanding and socioeconomic factors.

Interventions

1. Administer oxygen therapy via nasal cannula at 2 L/min to improve oxygenation.
2. Monitor fluid intake and output, restrict sodium intake, and administer prescribed diuretics to reduce fluid overload.
3. Educate the patient and family about the importance of medication adherence, dietary restrictions, and daily weight monitoring.
4. Collaborate with the healthcare team to adjust medication regimen, including ACE inhibitors, beta blockers, and diuretics.

Rationale for interventions

1. Oxygen therapy improves oxygenation and relieves dyspnea.
2. Diuretics help reduce fluid overload and alleviate symptoms of congestion.
3. Patient education promotes self-management and empowers the patient to participate in their care

Evaluation

- Mr. Johnson's oxygen saturation improves to 94% on supplemental oxygen.
- Crackles in lung bases diminish after diuretic therapy, and lower extremity edema decreases.
- Patient verbalizes understanding of medication regimen and plans to adhere to prescribed treatment.
- Follow-up appointment scheduled for cardiac rehabilitation and medication review.

Broken bone

Patient background

Emma is an 11-year-old female who reports severe pain and inability to move her left arm after falling over during her soccer game.

Assessment findings

- **Physical exam:** Left arm deformity and swelling in the distal position of the forearm, there is visible bruising and tenderness upon palpation.
- **Range of motion:** There is limited range of motion in the left arm, however there is no numbness or tingling reported. She has a reduced grip in the left hand.
- **Pain:** Emma rates her pain an 8/10 at the site of injury.
- **Vital signs:** Temperature: 98.4°F, BP: 110/70 mmHG, HR: 90 bpm, RR: 20 breaths/min, Oxygen saturation 98% on room air

Nursing diagnoses

1. Acute pain related to fracture of the distal radius
2. Impaired physical mobility related to pain and fracture
3. Anxiety related to injury and fear of treatment

Interventions

1. Administer pain medication as prescribed
2. Apply a splint or cast
3. Assess neurovascular status frequently (every 1 to 2 hours initially)
4. Provide emotional support and reassurance
5. Educate family on cast care and signs of complications

Rationale for interventions

Pain management is essential for decreasing pain as well as anxiety for a patient. Understanding the injury, treatment plan and recovery process allows the patient as well as family to comply with practitioner suggestions and supports the early detection of any possible complications.

Evaluation

- Emma's pain level decreased from an 8/10 to a 3/10 after 30 minutes of administering pain medication, and she reports feeling more comfortable.
- The arm is properly immobilized in a cast, and neurovascular checks remain within normal limits.
- The patient expresses less anxiety after receiving more information about her injury as well as the recovery process and treatment plan.
- The family understands possible complications and cast care.

Patient background

Assessment findings

Nursing diagnoses

Interventions

Rationale for interventions

Evaluation