NURSING 202 – ADVANCED CONCEPTS OF NURSING
CLASS PREP - CHEST TRAUMA: CHEST TUBES & DRAINAGE SYSTEMS

It is important for the nurse to provide competent care when the patient has a chest tube. Independently review chest tube care and answer the following questions.

1. What should be your focal assessments for a patient with a chest tube?

   Your focal assessments for a patient with a chest tube would include assessing for tidaling and bubbling to ensure that the drainage system is working effectively and free of leaks. Once you ensure this, then you can complete the mnemonic FOCA which means fluctuation, output, color, and air leak. Other good practices can include completing a respiratory assessment, ensuring a minimal pain level, and VS within normal limits. It is also important to view the insertion site to ensure the sterile dressing is dry and intact. If bubbling or tidaling were to present, you can assess for any kink in the tubing or for loose connections within the closed system drainage device. Also, it is good habit to assess your supplies at the bedside. A patient with a chest tube should have two guarded clamps, sterile water, Vaseline gauze, 4X4 sterile dressing and waterproof tape.

2. Define the term “tidaling”.

   Tidaling is defined as the normal fluctuation of the water within the water-seal chamber. It is an up and down movement of water in concert with respiration that reflects iintrapleural pressure changes during inspiration and expiration. In simple terms, tidaling is the term used to explain a rise with inspiration and a fall with expiration in the spontaneously breathing patient.

3. Why might tidaling fail to occur?

   Tidaling might fail to occur if the drainage system is blocked, meaning an occluded

chest tube, potentially caused by lungs during re-expansion, or if the system is attached to suction.

4. Define/describe the term “bubbling”.

   Bubbling within the collection system is normal at the end of expiration in spontaneously breathing patients with pneumothorax and normal at peak inspiration in ventilated patients with pneumothorax. On the other hand, continuous (non-stop) bubbling in the collection system is not normal and requires immediate action.

5. What causes bubbling?

   Bubbling can be caused by an air leak in the drainage system or a leak from the patient known as a bronchopleural leak.

6. What is an acceptable safety measure regarding tubing connections for chest tubes and drainage tubing?

   An acceptable safety measure regarding tubing connections for chest tubes and drainage tubing include keeping the chambers up right, below the site of the insertion, and keeping the clamp open as ordered, measuring the output as ordered, and keeping it a closed sterile system.

7. What is the generally ordered suction pressure for a chest tube drainage system?

   The generally ordered suction pressure for a chest tube drainage system is around 20 cm H20.

8. What pressure should you set the wall suction regulator to?

   You should set the wall suction regulator to around 80-100 mmHg.

9. What type of dressing would be used for a chest tube dressing?

   A petroleum gauze held in place by a 4 X 4 sterile gauze and secured with sterile tape is generally the best practice for a chest tube dressing.

10. Name 2 priority nursing diagnoses when providing care to the patient who has a chest tube.

    Acute Pain

    Impaired Gas Exchange