Prone Positioning Procedure: Intubated Patient

A. Personnel
   1. 3 nurses
   2. 1 licensed respiratory therapist (LRT)
   3. Critical care team (to be notified before repositioning)

B. Equipment needed
   1. Critical care bed
   2. Flat sheet
   3. Pillows for positioning
   4. 1000-mL IV bag (remove 250 mL of fluid to soften the bag to use it as a facial pillow)

C. Before repositioning
   1. Explain procedure to patient and family.
   2. Have a team huddle to discuss the process.
      i. Assign roles
      ii. Assemble equipment
      iii. Ensure that tasks and procedures that cannot be performed in prone position (eg, CT, feeding tube placement, echocardiography) have been performed before repositioning.
   3. Ensure that emergency equipment is available.
   4. Medication-induced paralysis is not necessary, but the patient must be well sedated before repositioning.
   5. A minimum of 4 people must be present, one of whom is the LRT.
   6. Ensure that the endotracheal tube (ETT) is in good position and well secured. Remove bite block to minimize skin breakdown. If the ventilator is on patient’s left, the ETT should be secured to the right side of the mouth and vice versa before repositioning.
   7. Check vital signs, preoxygenate with 100% Fio₂ for 3 minutes, and suction ETT/oropharynx.
   8. Prep patient for repositioning.
      i. Discontinue equipment, IV fluids, and pneumoboots if not needed during repositioning.
      ii. Cap nasogastric and orogastric tubes and stop tube feeding. Post-pyloric feeding is suggested to reduce the risk of aspiration.
      iii. Prepare all lines and tubes for placement before repositioning. The patient’s lines and tubes will be located on the opposite side of the bed after repositioning. Move IV pumps and tubes to the foot of the bed to avoid patient lying on the lines while repositioning.
      iv. Foam dressing may need to be placed on bony prominences to protect skin from breakdown.
      v. Place eye lubrication gel in both eyes to protect corneas from abrasion. If unable to maintain eyelids in closed position, they may need to be taped closed.
   9. Remove all monitoring equipment just before repositioning. ECG patches will need to be removed from patient’s chest and placed on patient’s back. Remember to replace them on the chest after repositioning.

D. Repositioning
1. With the bed adjusted to maximum inflation, pull patient to one side of the bed, opposite the ventilator. Always turn patient in the direction of the ventilator.
2. Place a new sheet on the side of the bed opposite the patient (ventilator side). One-third of the sheet should be tucked under patient. This will be the clean sheet that is pulled under patient to help with repositioning.
3. The LRT should be positioned at the head of the bed to monitor the airway and ventilator tubing while repositioning.
4. The nurses should be positioned on each side of patient.
5. Tip the patient up on one side, turning toward the ventilator, with patient’s face toward the ventilator. The arm next to the mattress should be tucked next to the body.
6. Recheck all lines, and suction the airway again if needed.
7. Continue turning the patient all the way over, toward the ventilator, to the prone position.
   Use the new sheet to pull patient over. Discard the old sheet.
8. Position patient’s head on the pillow, with patient’s face turned toward the ventilator.
   Recheck the ETT and breath sounds.
9. Position patient to the center of the bed using the sheet. Elevate patient using the sheet to place the pillow or pillows under the nipple line, allowing patient’s head to hang freely.
10. Position patient’s arms in swimmer position. The arm close to the ventilator should be positioned toward the head of the bed. The bedside table and pillows may be used to position this arm if it is unable to be placed in an upward position toward the head of the bed. The opposite arm should be positioned toward the foot of the bed.
11. Place patient in reverse Trendelenburg position with lateral rotation of the body and pillows under the side of the patient with the upward arm. This mitigates the risk of aspiration and reduces pressure of the thorax from abdominal contents and improves venous drainage that may reduce the risk of facial and eyelid edema.
12. To minimize skin breakdown and facilitate lung expansion, place pillows under the lower legs to provide enough flexion so that the toes are floated off the bed surface. Ensure that patient’s abdomen does not create pressure on the diaphragm; padding at the hips and shoulders with pillows may be necessary to allow the abdomen to hang rather than compress the thorax.
13. Replace ECG and monitoring equipment. Reassess vital signs.
14. Assess for changes in ventilatory parameters and oxygenation, possible ETT malposition or kinking, and need for suctioning after repositioning.
15. Reconnect nasogastric and orogastric feeding tubes, IVs, and other equipment. Make sure that tubes and equipment are not under patient, to avoid skin breakdown and compression of any devices.
16. Reposition body, extremities, and head every 2-4 hours (swimming) to minimize risk of skin breakdown and edema. Assess skin, if possible, for areas of redness and breakdown.
17. Clinician will determine duration of prone position depending on patient’s tolerance. It is recommended that patient be turned every 8-12 hours to supine position to assess for skin breakdown.
18. Change in respiratory status may take 10-15 minutes after placing patient in prone position.
   Patient may also decompensate from prone positioning.
19. If patient decompensates to cardiac arrest or worsening respiratory status, quickly reposition to supine position.

E. Returning to supine position
1. Explain procedure to patient and family.
2. Check vital signs, preoxygenate with 100% Fio₂ for 3 minutes, and suction ETT/oropharynx.
3. Prepare all lines and tubes before repositioning in the same manner as they were prepared before placing patient in prone position.
4. Pull the patient all the way to the side of the bed, opposite the ventilator. Adjust bed to maximum inflation.
5. Repeat turning procedure as outlined above.
6. Continue turning the patient all the way over to supine position in center of bed.
7. Assess vital signs, oxygenation, and ventilation.
8. Reassess position and function of all lines and tubes and replace ECG patches on patient’s chest.
9. Reassess skin to evaluate pressure areas, identifying areas for alternate padding before returning patient to prone position.