



Rancho Los Amigos National Rehabilitation Center

DEPARTMENT OF NURSING

INTENSIVE CARE UNIT

POLICY AND PROCEDURE

SUBJECT: ASSISTING WITH ELECTIVE
CARDIOVERSION

Policy No.: ICU002
Supersedes: ALL
Revised Date: 03/2023
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Purpose of Procedure: To define the nurse's role in converting unstable paroxysmal supraventricular tachycardia (PSVT), atrial fibrillation, atrial flutter, and unstable ventricular tachycardia with a pulse to a more stable rhythm.

Physician's Order Required: Yes

Performed By: ICU Nurse

Equipment:

Crash Cart
Intravenous sedative or analgesic agent (as prescribed)
Infusion pump on stand by
Reversal agents
12 lead EKG machine
Blood pressure monitoring equipment
Multi-function electrodes
Suction Set up
Oxygen set up with continuous pulse oximetry
Capnography set up
Stethoscope

Procedural Steps:

A. Preparation of Patient

1. Keep patient NPO at least 8 hours prior to the procedure. If patient is NPO except for meds, take the medications with small sips of water.
2. Hold digitalis 24 to 48 hours prior to the procedure.
KEY POINT: Digoxin in excessive amounts makes the cardiac muscle irritable. There is a possibility of developing ventricular tachycardia or other life-threatening dysrhythmias.
3. Obtain serum potassium, magnesium, digoxin levels and coagulation studies as ordered.

KEY POINT: Hypokalemia/Hyperkalemia may precipitate life-threatening dysrhythmias.

EFFECTIVE DATE: July, 1999
APPROVED BY: Critical Care Committee

KEY POINT: Verify that anticoagulation status has been evaluated by physician due to the risk of embolism in patients with A-fib longer than 48 hours

4. Verify that a 12 lead EKG is completed prior to the procedure to provide baseline data.
5. Clean and dry the patient's skin and apply the EKG leads and multifunction electrodes ensuring there is good contact between pads and skin. Shave hair off if needed.

KEYPOINT: Be sure the adhesive pads are pushed firmly in place and that there are no EKG electrodes, cords, permanent pacemaker or other metal underneath the electrode pads.

6. Obtain a rhythm strip before the procedure
7. Explain the procedure to the patient and verify that physician has obtained informed consent
8. Assure a patent I.V. access. Preferably 2 large bore IV catheters.
9. Obtain baseline vital signs, neurological checks, cardiovascular and respiratory assessment data and document.
10. Remove any metallic objects, medication patches and dentures if present. Keep patient on a dry surface.

Key Point: Metallic objects and water conduct electrical current and could result in burns. A medication patch may block transfer of energy from the paddles to the patient and may also produce a burn on the chest.

11. Sedate patient to minimize discomfort during procedure. Administer an analgesic as ordered. Refer to the Moderate and Deep Procedural Sedation policy (Administrative policy i. B815) for diagnostic and therapeutic procedure.

KEY POINT: Physician will order appropriate medication based on patient's needs.

12. Have oxygen and bag-valve mask device available. Monitor oxygen level throughout procedure and consider whether patient requires supplemental oxygen.

B. Preparation of Equipment

1. Place the crash cart at the bedside.
2. Turn knob to "Defibrillator" and presses the Sync On/Off button
3. Select the EKG lead which displays the best QRS complex (usually lead II). A full, upright R wave is required for effective synchronization
4. Make certain that the defibrillator is in "SYNC" mode and set to the energy level ordered by the physician in accordance with the American Heart Association ACLS Guidelines
5. State "ALL CLEAR" and visually verify that everyone is clear of contact with patient, bed, equipment and the oxygen is off
6. When the defibrillator indicates that it is charged, depress the "SHOCK" button and hold until the defibrillator discharges

KEY POINT: In "sync" mode, there will be a delay before the charge is released.

7. Assess for the presence of a pulse and observe the monitor for conversion of the dysrhythmia.
8. If ventricular fibrillation or pulseless ventricular tachycardia should occur during preparation or following cardioversion, immediately defibrillate based on the ACLS guidelines

D. Post-procedure Care

1. Obtain a 12 lead EKG
2. Check vital signs, neuro check, and cardiovascular and respiratory assessment every 15 minutes for the first hour, then per ICU routine
3. Assess the patient's chest for burns at electrode site. Report any chest burns to physician. Document and submit an event notification.
4. Monitor cardiac rhythm closely.

KEY POINT: Be prepared to repeat the procedure as patient may revert to the previous dysrhythmia.

SPECIAL CONSIDERATIONS:

1. If the patient has a pulse generator with a permanent pacemaker, place the multifunction electrode at least 1" away from it.
2. If a patient has a temporary pacemaker, it must be turned off. If present, disconnect the pacer wires from the pulse generator and insulate them with a rubber glove before cardioverting
3. If the patient has an implantable cardioverter-defibrillator (ICD) and the patient became unconscious, an external defibrillator can be used. Cardioversion and defibrillation procedures are not altered by an AICD.
 - a. Do not place pads over the device
 - b. If the cardioverter is delivering a shock, wait 30-60 seconds before cardioverting the patient with a manual defibrillator

DOCUMENTATION:

1. Document the procedure in the Medical Record.
 - a. Vital signs
 - b. Voltage delivered for each attempt.
 - c. Patient's response to each attempt.
 - d. Medications used.
 - e. Complications, if any.
2. Initiate or update a Cardiovascular care plan
3. Obtain a rhythm strip after the procedure and place it in the progress notes.
4. Document Neurologic, pulmonary and cardiovascular assessment before and after cardioversion and the condition of the chest was skin.

Patient/Family Education:

1. Assess patient and family understanding of underlying disease pathology and need for the cardioversion.
 2. Explain procedure to patient, signs and symptoms of neurodynamic compromise associated with pre-existing cardiac dysrhythmias to both patient and family
 3. Report results of the procedure to patient/family and answer or refer any questions they have to the cardiologist
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References:

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