

Transcutaneous Pacing – 30.220

DEFINITION:

Transcutaneous pacing is the technique of electronic cardiac pacing accomplished by using skin electrodes to pass repetitive electrical impulses through the thorax.

INDICATIONS:

Transcutaneous pacing should be considered in bradycardia with evidence of inadequate perfusion, (e.g. altered mental status, chest pain, hypotension, and other signs of shock). HR <50 BPM.

PROCEDURE:

- A. Ensure ECG pads are attached and monitor displays a rhythm.
- B. Attach pacing electrodes to anterior and posterior chest just to the left of the sternum and spinal column, respectively. Alternatively pads may be placed in the standard anterior and lateral position as with defibrillation. If there is difficulty in obtaining capture, try alternative position.
- C. Begin pacing at a heart rate of 60-80 BPM and 30 mA current output.
- D. Increase current by increments of 10 mAs while observing monitor for evidence of electrical capture. Confirm mechanical capture by checking pulses and BP.
- E. If patient is comfortable at this point, continue pacing. If patient is *uncomfortable*, administer **Midazolam 2.5 mg IV/IO/IN or 5 mg IM**. May replace with **Lorazepam 1 mg IV/IO/IN or 2 mg IM** or **Ketamine 1 mg/kg IV/IO or 4 mg/kg IM OLMC** (see med sheet)
- F. If patient still complains of pain, repeat dose of Midazolam once to max of 5 mg.
- G. If the patient remains unconscious during pacing, assess capture by observing the monitor and evaluating pulse and blood pressure changes. In the event of electrical capture and no pulses, follow PEA protocol.
- H. If there is no response to pacing and drugs, consult with OLMC. If a change in pacing rate is desired, contact OLMC.

PEDIATRIC PATIENTS:

Use above guidelines except:

- A. Give **Midazolam 0.1 mg/kg IV/IO to a MAX of 2.5 mg**. (May repeat once after 5 minutes.) If more needed, call OLMC.
- B. Use anterior/posterior pad placement first for patients less than 1 year.
- C. Begin pacing at smallest mA output.
- D. Increase current in increments of 10 mA while observing monitor for evidence of electrical capture.
- E. Confirm mechanical capture by checking pulses and BP.
- F. Contact OLMC for adjustments to rate based on age and response to pacing.

NOTES & PRECAUTIONS:

Transcutaneous pacing should not be used in the following settings:

- A. Asystole.
- B. Patients meeting Death In The Field criteria.
- C. Patients in traumatic cardiac arrest.