

Transcutaneous Pacing – 30.180

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 leads are placed followed by pacing pads. Set monitor to lead mode to pace.
- 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 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 capture is achieved and patient is uncomfortable, consider **Midazolam 2.5 mg IV/IO** or **5 mg IM/IN** if Bp >90 mmHg
OR
Fentanyl 50 mcg IV/IO may repeat to max of **200 mcg**
- F. If patient still complains of pain contact OLMC.
- 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, consider electrolyte imbalance. If a change in pacing rate is desired, contact OLMC.

PEDIATRIC PATIENTS:

Use above guidelines except:

- A. For discomfort after capture consider **Midazolam 0.1 mg/kg IV/IO** to a max 2.5 mg, or **0.2 mg/kg IM/IN** to a max of 5 mg. See Handtevy for age appropriate BP's
- B. Use anterior/posterior pad placement. If capture fails try repositioning.
- 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.