



Guideline 11.3 - Precordial Thump and Percussion (Fist) Pacing

Summary

To whom does this guideline apply?

This guideline applies to adults who require advanced life support (ALS).

Who is the audience for this guideline?

This guideline is for health professionals and those who provide healthcare in environments where equipment and drugs are available.

Summary of Recommendations

The Australian and New Zealand Committee on Resuscitation (ANZCOR) guideline has been reviewed and updated based on an ARC evidence review in 2017 (available at resus.org.au/worksheets-to-support-guidelines/) and ILCOR CoSTR 2020.^{1,2}

ANZCOR makes the following recommendations:

1. The precordial thump may be considered for patients with monitored pulseless ventricular tachycardia (pVT) if a defibrillator is not immediately available.
2. The precordial thump is relatively ineffective for ventricular fibrillation (VF), and is not recommended for this rhythm.
3. The precordial thump should not be used for unwitnessed cardiac arrest.
4. A precordial thump should not be used in patients with a recent sternotomy (e.g. for coronary artery grafts or valve replacement), or recent chest trauma.
5. For patients in cardiac arrest, percussion (fist) pacing is not recommended.
6. Percussion (fist) pacing may be considered in haemodynamically unstable bradyarrhythmias until an electrical pacemaker (transcutaneous or transvenous), or medication to increase heart rate are available.

1.0 | Introduction

A precordial thump is a single sharp blow delivered by the rescuer's fist to the mid sternum of the victim's chest.

2.0 | Technique

The clenched fist of the rescuer is held approximately 25 to 30cm (10 to 12 inches) above the sternum of the victim. The fist is then brought down sharply so the inside (medial, ulna) side of the fist makes contact with the mid-sternum of the victim's chest.

The precordial thump should not be taught as an isolated technique. It should be taught as part of an advanced life support (ALS) course in which the student learns to identify life threatening arrhythmias and the appropriate steps to undertake if the chest thump fails. It is best taught with the skill of defibrillation.

Recommendation

A precordial thump may be considered for patients with monitored pulseless ventricular tachycardia (pVT) if a defibrillator is not immediately available [Good Practice Statement].

The precordial thump is relatively ineffective for ventricular fibrillation (VF), and is not recommended for this rhythm³ [Good Practice Statement].

The precordial thump should not be used for unwitnessed cardiac arrest³ [Good Practice Statement].

A precordial thump should not be used in patients with a recent sternotomy (e.g. for coronary artery grafts or valve replacement), or recent chest trauma [Good Practice Statement].

3.0 | Percussion (FIST) Pacing

Percussion fist pacing is delivered by the side of a closed fist delivering repeated firm thumps to the praecordium, just lateral to the lower left sternal edge, to provide mechanical pacing until an electrical pacemaker is available.

Recommendation

For patients in cardiac arrest, percussion (fist) pacing is not recommended [CoSTR 2020, strong recommendation, very low-certainty evidence].²

Percussion (fist) pacing may be considered in haemodynamically unstable bradyarrhythmias until an electrical pacemaker (transcutaneous or transvenous), or medication to increase heart

rate are available [CoSTR 2020, weak recommendation, very-low certainty evidence].²

Abbreviations

Abbreviation	Meaning/Phrase
ALS	Advanced life support
ANZCOR	Australian and New Zealand Committee on Resuscitation
ARC	Australian Resuscitation Council
CPR	Cardiopulmonary resuscitation
PEA	Pulseless electrical activity
PT	Precordial thump
pVT	Pulseless ventricular tachycardia
ROSC	Return of spontaneous circulation
VF	Ventricular fibrillation
VT	Ventricular tachycardia

References

1. ARC. Evidence Review. Precordial Thump, 2017.
[https://resus.org.au/new-and-revised-guidelines-and-editorial-changes/ Evidence Review GL 11.3](https://resus.org.au/new-and-revised-guidelines-and-editorial-changes/Evidence-Review-GL-11.3)
2. Olasveengen TM, Mancini ME, Perkins GD et al. Adult Basic Life Support. 2020 International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. Resuscitation 2020;A35-79.
3. Koster RW, Sayre MR, Botha M, Cave DM, Cudnik MT, Handley AJ, et al. Part 5: Adult basic life support: 2010 International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. Resuscitation. 2010;81 Suppl 1:e48-70.

About this Guideline

Search date/s	N/A
Questions/PICOs:	N/A
Method:	GRADE
Principal reviewers:	Michael Parr; Margaret Nicholson, Tonia Nicholson
Major changes from previous Guideline	No major changes.
Other Consultation:	N/A
Approved:	17 April 2024
Guidelines Superseded:	July 2011