Cardiac Arrest in Pregnancy

MODIFICATION FROM THE ALS ALGORYTHM

- Hand position slightly higher than usual
- Left Uterine Displacement (LUD): > 20 weeks POA
- Early PMCD by expert team
- Do not forget 4 “P”s
- Paddle position / Pad position may need to alter.
- Multidisciplinary approach is mandatary
- Early definitive airway by trained personals
- All IV access and medication administration should be established **above the diaphragm**

EARLY DETECTION

Left Uterine Displacement (LUD): > 20 weeks POA

Call for Help – O & G , Anesthesia , Neonatal

HIGH-QUALITY CPR

Shockable

Non - Shockable

RHYTHM CHECK

EARLY DEFIBRILATION

Check Reversible Causes

4H’s
Hypoxia
Hypovolemia - Bleeding
Hyper/Hypokalemia
Hypothermia
Hydrogen iron - Acidosis

4T’s
Toxins
Tamponade
Thrombus - Cardiac and Pulmonary
Tension Pneumothorax

4P’s
Pre-eclampsia and eclampsia
Puerperal sepsis
Placental and uterine complications
Peripartum Cardiomyopathy

High quality CPR. IV Adrenaline- IV access above the diaphragm

PERIMORTEM CESAREAN DELIVERY (PMCD) AS SOON AS POSSIBLE BY TRAINED TEAM IF POA >20 WEEKS
CONTINUE HIGH QUALITY CPR

ROSC AND POST RESUS CARE

Critically Ill Workup

Adopted from ERC 2025 and AHA cardiac arrest guidelines
Applicable to POA more than 20 weeks of pregnancy

Cardiac Arrest Scribing Chart

Date : ..... Scribing Nurse : Name: Signature:

Patient name: ..... Team Leader: Name: Signature:

BHT NO: .....

Time-Cycle	Rhythm	Pulse	Action			Airway	$ETCO_2$	CPR	Reversible causes		
			Shock	Drugs	Other	√/×			Cause	Ix	Correction
					-				Tension	Clinical USS [M]	Needle decompression-refer shock workup
											Finger Thoracostomy- refer shock workup
									Tamponade	POCUS	Pericardiocentesis-refer shock workup
											Thoracotomy
									Hypovolemia	Cross match in bleeding	Warm IV fluids
											O group Blood
											Group blood
											Massive Transfusion
											Arrest Bleeding
									Hypoxia		O2 – Bag-valve-mask/LMA-bag-valve/ET-bag-valve
									Hypokalemia	VBG	KCL-Rapid replacement: Initial infusion of 2 mmol/min for 10 minutes Followed by 10mmol over 5-10 minutes. Slow correction afterwards .
									Hyperkalemia	VBG	1. Calcium-IV 10% Calcium Gluconate 30ml -Use large IV access and give as fast bolus over 5min 2. Insulin–Dextrose- IV 50% glucose 50 ml as a rapid bolus. Followed by 10% glucose infusion at 50ml/ hour for 5 hours if pre-treatment BG < 7.0 mmol/L 3. Salbutamol 10 – 20 mg nebulized
									Hypothermia	Temp	Bare hugger
											Rewarming – Warm IVF
											Bladder-Irrigation
									H+ / Acidosis	VBG	NaHCO3- • Dose: 50 ml of an 8.4% solution IV • Consider shockable and non-shockable rhythms for cardiac arrest associated with pH< 7.1 or hyperkalemia or tricyclic overdose.
									Toxins	Drug chart/Anaphylaxis	Antidote-Refer management of poisoning. Anaphylaxis management
									Thrombosis Cardiac	POCUS	PCI
											Thrombolysis-Refer thrombolysis protocol
									Thrombosis Pulmonary	POCUS/	Thrombolysis-Refer shock algorithm . Anticoagulation- S/C Enoxaparin 1mg/kg. Refer shock algorithm
										DVT signs	

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Time-Cycle	Rhythm	Pulse	Action			Airway	$ETCO_2$	CPR	Reversible causes			
			Shock	Drugs	Other	√/×			Cause	Ix	Correction	
9.46pm		-	-	-	-	-	-	√	Tension	Clinical USS [M]	Needle decompression-refer shock workup	-
9.47pm	VT	-	-	-							Finger Thoracostomy- refer shock workup	-
9.48pm	VT	-	150J	-		FM	-	√	Tamponade	POCUS	Pericardiocentesis-refer shock workup	-
9.50pm	VF	-	-					√			Thoracotomy	-
9.51pm	VF	-	270J			LMA	16	√	Hypovolemia	Cross match in bleeding	Warm IV fluids	√
9.53pm	VT	-	-					√			O group Blood	
9.54pm	VT		270J	IV Adrenaline 1mg IV Amiodarone 300mg		LMA	18	√			Group blood	
9.56pm	Sinus rhythm	+	-								Massive Transfusion	
											Arrest Bleeding	√
									Hypoxia		O2 – Bag-valve-mask/LMA-bag-valve/ET-bag-valve	√
									Hypokalemia	VBG	KCL-Rapid replacement: Initial infusion of 2 mmol/min for 10 minutes Followed by 10mmol over 5-10 minutes. Slow correction afterwards .	-
									Hyperkalemia	VBG	1. Calcium-IV 10% Calcium Gluconate 30ml -Use large IV access and give as fast bolus 2. Insulin–Dextrose- IV 50% glucose 50 ml as a rapid bolus. Followed by 10% glucose infusion at 50ml/ hour for 5 hours if pre-treatment BG < 7.0 mmol/L 3. Salbutamol 10 – 20 mg nebulized	-
									Hypothermia	Temp	Bare hugger	-
											Rewarming – Warm IVF	-

											Bladder-Irrigation	-
									H+ / Acidosis	VBG	NaHCO3- • Dose: 50 ml of an 8.4% solution IV • Consider in shockable and non-shockable rhythms for cardiac arrest associated with pH< 7.1 or hyperkalemia or tricyclic overdose.	-
									Toxins	Drug chart/Anaphylaxis	Antidote-Refer management of poisoning. Anaphylaxis management	-
									Thrombosis Cardiac	POCUS	PCI	-
											Thrombolysis-Refer thrombolysis protocol	√
									Thrombosis Pulmonary	POCUS	Thrombolysis-Refer shock algorithm . Anticoagulation- S/C Enoxaparin 1mg/kg. Refer shock algorithm	-
										DVT signs		-