OBSTETRIC PREGNANT CARDIAC ARREST

CALL FOR HELP!

CALL FOR CODE CART
START CPR IMMEDIATELY!

PLACE HANDS HIGHER ON STERNUM DURING CPR

PUSH HARD!
≥2" ≥ 2 INCHES DEEP
ALLOW COMPLETE CHEST RECOIL

PUSH FAST!
≥100 ≥ 100 COMPRESSIONS/MIN

BEGIN CPR

PLACE IN 30° LATERAL TILT

PUSH HARD!

PREPARE FOR IMMEDIATE C-SECTION AT SITE OF ARREST. IF NO ROSC WITHIN 4 MINS OF ARREST, PROCEED TO IMMEDIATE C-SECTION!

ROSC = RETURN OF SPONTANEOUS CIRCULATION

CPR TIPS

WHO’S THE LEADER?
IDENTIFY THE TEAM LEADER

MINIMIZE BREAKS IN CPR
ASSIGN TIMER/DOCUMENTER

ROTATE COMPRESSORS Q2 MIN

MONITOR CPR QUALITY

GET SCALPEL!

1. DX

PREGNANT + NO PULSE

2. START CPR IMMEDIATELY!

3. PLACE HANDS HIGHER ON STERNUM DURING CPR

4. CPR TIPS

WHO’S THE LEADER?

MINIMIZE BREAKS IN CPR

ROTATE COMPRESSORS Q2 MIN

MONITOR CPR QUALITY

5. GET SCALPEL!

PREPARE FOR IMMEDIATE C-SECTION AT SITE OF ARREST. IF NO ROSC WITHIN 4 MINS OF ARREST, PROCEED TO IMMEDIATE C-SECTION!

ROSC = RETURN OF SPONTANEOUS CIRCULATION

LARRY F. CHU, MD, MS, ANDREA J. FULLER, MD, STEVE LIPMAN, MD AND KYLE HARRISON, MD

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ROTATE COMPRESSORS Q2 MIN

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ROSC = RETURN OF SPONTANEOUS CIRCULATION
OBSTETRIC PREGNANT
CARDIAC ARREST

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6 ASSESS & PERFORM

PLACE AED
PLACE AED PADS AND ASSESS
ASSESS RHYTHM

ADEQUATE VENTILATION?
AIRWAY & VENTILATION?

IV LINE
ADEQUATE IV ACCESS? IF NOT->
PLACE ABOVE DIAPHRAGM

IO LINE
CONSIDER HUMERAL IO LINE

7 ASSESS FOR SHOCKABLE RHYTHM. IF VT/VF SHOCK!

DEFIBRILLATE
200 JOULES
(BIPHASIC ENERGY)

8 DRUGS

EPINEPHRINE 1MG IV
EVERY 3-5 MIN

IF POSSIBLE ASSIGN PERSON TO TIME & ADMINISTER DOSES

CONSIDER
VASOPRESSIN
40 UNITS IV ONCE

VASOPRESSIN DOSE COULD REPLACE ONE EPINEPHRINE DOSE

**Obstetric Cardiac Arrest**

**Rx**
- Begin CPR
  - ≥100 compressions/min
  - CONT. CPR
  - ≥100
  - REPEAT CYCLE UNTIL RESUSCITATED
  - CPR + DEFIBRILLATE (IF VT/VF) EVERY 2 MINS + DRUGS

**Other**
- If running, stop Mg infusion, give 10% CaCl₂ 10cc IV
- Ventilate 10 breaths/min
- Deliver 100% Oxygen
- Give Ca²⁺

**First Rule Out Common Treatable Causes**

**PEA/Asystole**
1) Bleeding
2) Drug Toxicity
   - Local Anesthetic, Mg, Oxytocin
3) High Spinal
4) Hypoventilation
5) Embolism
   - Pulmonary, AFE, VAE

**VF/VT**
1) Hyperkalemia
2) Coronary Thrombosis
3) HypoMg or Torsades
   - TX: Consider Antiarrhythmics
     - Amiodarone 300 mg IV or
     - Lidocaine 100 mg IV

**Other Causes**
- Continue to #13 to rule out other causes & treatment guidelines.

**Continued on Next Page**
### CROSS-CHECK POSSIBLE CAUSES WITH TEAM FOR DIAGNOSIS

<table>
<thead>
<tr>
<th>BLEEDING/DIC</th>
<th>EMBOLISM</th>
<th>ANESTHETICS</th>
<th>UTERINE ATONY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IF SUSPECTED THEN:</strong></td>
<td><strong>IF PULMONARY EMBOLISM:</strong></td>
<td><strong>ANESTHETIC COMPLICATIONS INCLUDE:</strong></td>
<td><strong>IF SUSPECTED CONSIDER:</strong></td>
</tr>
</tbody>
</table>
| 1) Rapid bolus IV fluids.  
2) Activate MTG.  
3) Consider transfusion of blood products.  
4) Consider placement of arterial line.  
5) See Tab #14 - MTG | 1) Consider TEE/TTE to rule out RV failure.  
2) Consider thrombolytic therapy - discuss risk/benefits with team. | 1) Spinal shock from regional anesthesia - Tab #23  
2) Local anesthetic toxicity - Tab #11  
3) Loss of airway or ventilation - Tab #5, 10 | 1) Oxytocin  
2) Misoprostol  
3) Methylergonovine  
4) Carboprost  
5) Bimanual fundal massage  
6) See Tab #27 - Uterine Atony |
| EMBOLISM | **IF AMNIOTIC FLUID EMBOLISM:** | | |
| 1) See Tab #24 - AFE | 1) Consider TEE/TTE to rule out RV failure.  
2) Consider thrombolytic therapy - discuss risk/benefits with team. | | |
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| IF SUSPECTED CONSIDER: | **IF SUSPECTED CONSIDER:** | | |
| 1) Myocardial infarction - consider percutaneous coronary intervention.  
2) Aortic dissection - Consider cardiac surgery consult  
3) Congenital heart disease - Consider cards consult  
4) Pulmonary hypertension - Consider NO.  
5) Magnesium toxicity - Consider CaCl₂ 1gmlIV | 1) Pre-eclampsia  
2) Eclampsia  
3) See Tab #12 - Hypertension | 1) Goals: CVP ≥8-12mmHg, MAP ≥65mmHg, Urine output ≥0.5ml/kg/h, MVO₂ Sat ≥65%.  
2) Fluid therapy  
3) Antimicrobial therapy  
4) Removing source of sepsis  
6) See Tab #32 - Sepsis | |
| **CARCINOMA DISEASE** | **HYPERTENSION** | **PLACENTA** | **SEPSIS** |
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CROSS-CHECK POSSIBLE CAUSES WITH TEAM FOR DIAGNOSIS

PNEUMOTHORAX

**SUSPECT IF:**
- Unilateral breath sounds, ↑ neck veins, ➔ trachea

**IF SUSPECTED:**
- Perform needle decompression (Mid-clavicular line 2nd intercostal space) and chest tube.

**RULE OUT:**
1) Hyperkalemia
2) Hypocalcemia
3) Acidosis
4) Hypoglycemia
5) Hypokalemia

**IF SUSPECTED THEN:**
1) Consider TEE
2) Consider emergent revascularization or cath lab.
3) Consider intra aortic balloon pump

ABG TO RULE OUT

**IF SUSPECTED THEN:**
1) 100% FiO₂. In OR: rule out switched gas lines. Use separate O₂ tank.
2) Check connections
   - Re-confirm ET tube placement.
3) Confirm bilateral breath sounds.
4) Suction ET tube.
5) Rule out other causes with TTE/TEE.

CORONARY THROMBOSIS

**IF SUSPECTED THEN:**
1) Consider TEE
2) Consider emergent revascularization or cath lab.
3) Consider intra aortic balloon pump

HYPOXIA

**IF SUSPECTED THEN:**
1) 100% FiO₂. In OR: rule out switched gas lines. Use separate O₂ tank.
2) Check connections
   - Re-confirm ET tube placement.
3) Confirm bilateral breath sounds.
4) Suction ET tube.
5) Rule out other causes with TTE/TEE.

CARDIAC TAMPOANDE

**SUSPECT IF:**
1) ↑CVP, equalization of right & left- sided pressures.
2) Consider TEE/TTE to rule out pericardial effusion.
3) If present, perform pericardiocentesis.

**IF SUSPECTED THEN:**
1) Rule out malignant hyperthermia and treat if found.

HYPO/HYPERTHERMIA

**CONSIDER ALL MEDS RECEIVED INCLUDING:**
1) Existing infusions
2) Prescribed medications
3) Illicit drug use
4) Syringe swaps or drug errors
5) Poisoning

**IF SUSPECTED THEN:**
1) Contact poison control/pharmacy
2) Administer appropriate therapy/antidote

TOXINS

**FOR A POISON EMERGENCY IN THE UNITED STATES:**
1) Call 1-800-222-1222
**VT/VFIB CONSIDERATIONS**

**ANTIARYRHYMICS**
- Amiodarone 300 mg IV or Lidocaine 100 mg IV

**HYPERKALEMIA?**
- Check ABG:
  - >7.0 mmol/L: Life Threatening
  - 6.1-6.9 mmol/L: Moderate
- Consider: Insulin 10 units IV with glucose 40-60 gm IV
- Consider: 20 ml 10% Calcium-Gluconate IV (over 5-10 min*, repeat if needed)
- Also consider: Salbutemol 0.5 mg IV
- If PH < 7.20 consider: Bicarbonate 1-2 Amps IV

*Infuse over 20-30 min if patient on Digoxin

**CORONARY THROMBOSIS?**
- If suspected then:
  1) Consider TTE.
  2) Consider emergent revascularization/Cath Lab.
  3) Consider intra aortic balloon pump.

**↓MG OR TORSADES?**
- Consider MgSO4 2gm IV