

AEROMED OUTREACH

MARCH 2018

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AEROMED PIT CREW FOR THE DAY

Aeromed and Tampa General Hospital Volunteer Services recently presented Aeromed Pit Crew For The Day to local Boys and Girls Club THINK B.I.G. program. The THINK B.I.G. program provides education, youth development, and career exploration opportunities to increase academic achievement and knowledge of career opportunities.

Club members learned what the educational requirements are for flight crew members, required years of experience, average starting salaries, and much more. Flight crew members shared their personal stories of going to school and gaining the knowledge required for flight crew job position. Club members also had the opportunity to experi-

ence and practice the hands-on critical life-saving skills of airway, breathing, and circulation used every day on the job as a flight crew member.



PHYSICIAN'S ARTICLE

OB Emergencies – Part 1

Evaluation and treatment of the pregnant patient represent a challenge for all levels of medical providers, from first responder to EMS physician. Thankfully, major complications and acute life-threatening illnesses are rare. However, when they occur, many special considerations must be taken into account in order to pro-

vide the best medical care. What makes the pregnant patient different? There are some physiologic changes that occur in pregnancy and are important for providers to remember, especially when assessing a pregnant trauma patient or dealing with an airway in a pregnant patient. These include:

- Blood volume increased by 50%
- Baseline heart rate increased 10-15%
- Cardiac output increased
- Blood pressure decreased or normal



A: When dealing with critically ill or injured pregnant patients, you don't want to

UPCOMING OUTREACH ACTIVITIES

- **Stop The Bleed Class** offered at TGH the 2nd Thursday each month at 10am and the 4th Thursday each month at 5:30pm April-June. Contact Jennifer Mefford at jmefford@tgh.org for additional information

PHYSICIAN'S ARTICLE CONT

forget your ABCs. Airway management is among the most critical skills for the EMS provider to master. Without proper airway maintenance, a patient has a small chance of even arriving at the hospital alive. Several anatomical changes to the airway during pregnancy can complicate airway management in the pre-hospital setting (see below).

B: The gravid uterus causes significant upward displacement of the diaphragm, restricting lung function. FRC is decreased by approximately 20% in pregnancy. This, in combination with increased oxygen consumption of 30–60% and decreased venous return due to inferior vena cava compression, can lead to rapid desaturation with any medical or traumatic insult. The patient with respiratory distress or who needs ventilation should be placed as upright as feasible to decrease abdominal pressure on the thorax. Oxygen should

be used more liberally to ensure the fetus is receiving adequate oxygenation.

C: As described earlier, pregnancy is accompanied by increased blood volume, which may allow initial compensation for even major blood loss, followed by rapid deterioration. Be generous with fluid resuscitation and use blood earlier than you would expect.

Keep in mind that any visual inspection or palpation beneath umbilical should be deferred to ED personnel unless delivery is imminent or if the patient is having life threatening vaginal bleeding.

A few emergencies that can occur within pregnancy include preeclampsia and eclampsia. Preeclampsia is a multisystem disorder characterized by the presence of hypertension and proteinuria after 20 weeks of gestation. You will see SBP>160 or DBP > 110 mmHg without previous-

ly diagnosed hypertension. You may also see increased pedal edema, headache, epigastric or RUQ abdominal pain. Eclampsia is defined as the presence of new-onset grand mal seizures in a woman with preeclampsia. Typically occur >28 weeks and up to 1 month post-partum. Management for both is with magnesium sulfate 4-6g over 10-15 mins, then 2g/hr. Magnesium can cause respiratory depression, so monitor airway. BP control with labetalol. Seizure control with benzos.

Practice Questions

Question #1:

Pick the correct set of physiologic changes in pregnancy:

- A. Blood volume ↑, HR ↓, respirations ↑, cardiac output ↓
- B. Blood volume ↑, HR ↑, respirations ↑, cardiac output ↑
- C. Blood volume ↓, HR ↓, respirations ↓, cardiac output ↑
- D. Blood volume ↓, HR

↑, respirations ↓, cardiac output ↓

Question #2:

32yo female, currently 32 weeks gestation, is being evaluated in a community emergency department for headache and leg swelling. Her BP is 180/110. You begin inter-facility transport to nearest OB hospital. She begins to have a seizure on your aircraft. What medication(s) do you want to administer?

- A. Midazolam/Versed IV
- B. Magnesium Sulfate IV
- C. Labetalol IV
- D. All of the above

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Answers: B and D