Pediatric Cases
Acute Care

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Case Presentation

9 day old female
CC: poor feeding, increased work of breathing, decreased uop for three days

Earlier today patient seen by PMD for the second day in a row with complaints of poor feeding, uncontrolled fussiness, and today increased work of breathing.
PMD referred patient to the ED for further workup.

Case Presentation

Patient’s presentation upon arrival to the ED:
➤ VS: HR -180, RR- 72, BP- unable to obtain, O₂ Sat- 62%, Temp 95.7 °F
➤ Physical Exam findings:
  ▪ General: lethargic, pale, mottled, toxic appearing
  ▪ CV: sinus tachycardia, ejection murmur along left sternal border, no gallop, UE pulses 1+, LE pulses unable to palpate, CR 4-5
  ▪ Lungs: CC bilaterally, no wheeze, tachypnea, subcostal retractions
  ▪ Abdomen: soft, nondistended, liver palpable 4cm below RCM
  ▪ Skin: no rashes, pale, and cold
  ▪ Neuro: lethargic, AFSF, PERRL

Review of Systems
➤ Negative except findings noted in HPI
➤ Immunizations UTD- received Hep B
➤ Medications- none
➤ No past surgical history
➤ FMH- unknown
➤ Social hx: mother GBS +, drug use (daily cigarette use, meth, marijuana, other IV drugs), bipolar disorder.

Labs and tests obtained in ED

CBG:

CBC:

MP: 1500 2000 4000 230

Albumin 2.5

CSF: WBC: 35; protein: 70
Glu: 50; RBC: 10,000
Differential Diagnoses

- Sepsis
- Congenital Heart Defect
- Inborn error of metabolism

Critical Coarctation of the Aorta

Presentation: Cardiogenic Shock

Treatment:
- Started Alprostadil (PGE$_1$) @ 0.1 mcq/kg/min
- Sodium bicarbonate bolus 2mcq/kg/dose
- Fluid bolus 10ml/kg
- Admitted to the CICU for further resuscitation and treatment
Anatomy

Physiology

- Obstruction of blood flow from left ventricle to the systemic circulation
- Degree of arch obstruction determines presentation
- Decreased cardiac output to systemic circulation
- Decreased organ perfusion

Associated Defects

- Obstruction of blood flow from left ventricle to the systemic circulation
- Degree of arch obstruction determines presentation
- Decreased cardiac output to systemic circulation
- Decreased organ perfusion
- Turner Syndrome – CoA found ~ 15% of patients with Turner

Diagnostic Studies

- Echocardiography
- EKG
  - May show left ventricular hypertrophy
- Chest x-ray
  - Pulmonary congestion
  - Cardiomegaly
- Karyotype if consider for possible Turner Syndrome

Surgical Intervention

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Summary

- Presenting signs of infants with critical coarctation of the aorta include: cardiomegaly, decrease peripheral pulses, poor perfusion, tachypnea, metabolic acidosis, FTT, and difficulty feeding
- Initial medical management: PGE1 and correction of shock
- Surgical intervention

References
