Postpartum hemorrhage and Hypertensive disorders in the peripartum period: case presentation

Shawna Hughes, MD PGY IV
4/17/2015

Case 1

- LM is a 39 yo AAF G8P707 @40w1d by LMP who received no prenatal care and was presenting to L&D to rule out labor. In triage she was noted to have severe range BP’s and was subsequently admitted. She has a history of chronic hypertension and has been on no medications since early pregnancy.
- Labor ruled out

History

- PMH: chronic hypertension on Zestoretic prior to pregnancy and through part of 1st trimester; Mild persistent asthma
- PSH: Cesarean Section x5; abdominal hemia repair with mesh x3
- Social Hx: 3 cig/day; denies EtOH/drug use
- NKDA
- Meds: PNV
- OB Hx: 2 NSVD, 5 C/S all full term. After last C/S she required a blood transfusion
  - Only 1 prenatal visit this pregnancy
  - A+/RI/HBV neg/RPR NR/HIV neg
- GYN Hx: non contributory
Assessment and Plan

- Admission Dx: chronic hypertension with superimposed severe pre-eclampsia vs. hypertensive urgency
- Initial Management: BP 162-219/105-124
  - IV hydralazine push
  - MgSO4 for seizure prophylaxis
- Admission Labs:
  - Hb 11, Plt 150-150, Fibrinogen 408, PT/PTT/INR wnl
  - u/a: trace protein, trace Hb, Many bacteria; UTox: neg
- Given history of 5 prior sections patient was stabilized (BP 106/60) and taken to the OR for repeat cesarean section with possible hysterectomy.
- Uncomplicated cesarean Section, EBL 900cc; MgSO4 continued throughout cesarean section. BP range intraoperatively was 101-145/59-89. Male infant weighing 3070 g, APGARs 9/9.

POD 0/ early POD 1

- 2 hours post op approx. 300 cc of blood clots expressed. 800 mcg cytotec PR given
- Approx. 3 hours later patient was hypotensive (103/52) and urine output decreased to 30 cc/h (from 70 cc/h).
  - 2 u PRBC ordered and repeat coagulation studies sent
- 3 hours later bleeding improved, BP 124/83, UOP 55cc/h. Fibrinogen dropped to 162

POD 1

- Upon arrival of new OB team a bedside US performed to assess for retained POC, none seen. Uterus firm. In light of continued bleeding, relative hypotension and decline in fibrinogen level 1u FFP and 1 additional unit of pRBC ordered
- 1 hour later an additional 200 cc blood noted on bed pad. Bimanual exam showed soft lower uterine segment. Bimanual massage and additional 800 mcg cytotec given.
  - CBC returned: Hb 7.6, Plt 59
  - 1u pRBC and 1u superpack platelets
  - MgSO4 discontinued
  - Obtained consent for possible exploratory laparotomy/ abdominal hysterectomy in event it is indicated
POD 1 Continued

- 2 hours later a Bakri balloon with 450cc placed under sonogram guidance with evacuation of additional 150 cc of blood.
- 2 hours later a total of >1L has collected in the Bakri foley. Hb 6.3, Plt 83. Hysterectomy recommended for uncontrolled uterine atony causing postpartum hemorrhage. Total EBL approximately 2,500 cc since admission.
- Prior to proceeding to the operating room patient has received 5 u pRBC, 2 u FFP and 1 u platelets.
- With Gyn Oncology an Ex Lap TAH was performed without complication with 1 u pRBCs transfused intra-operatively.
- EBL 500 cc intra-operatively and 500 cc of blood clots protruding through hysterotomy/intrauterine cavity
- Approximately a 4 x 5 cm placental appearing tissue was removed from the lower uterine segment.

POD 2 (C/S)/ POD 1(TAH)

- Fibrinogen improved, Hb and platelets continued to decline.
- Throughout POD 1 s/p TAH blood products were replaced.
- CT AP was performed to r/o intrabdominal hemorrhage.
- VS wnl with exception of elevated BP.
- Restarted pre pregnancy Zestoretic.
- By POD 2 s/p TAH patient hemodynamically stable and not requiring any additional blood products.
- Hb 10.1, Plt 75.

Remainder of Hospital Course

- Difficulty controlling BP’s.
- Required additional IV pushes of hydralazine on POD 3/POD 2.
- PO anti-hypertensives increased and ultimately an additional agent (Norvasc) was added.
- DC on POD 6/ POD 5 with VNA.
- Hb on DC 10, Plt 150-450.
Case 2

- MT is a 39 yo AAF G7P4024 @ 31w4d with chronic hypertension (on no medications) admitted for evaluation and management of BP secondary to severe range BP in office (187/93) and headache.
- BP remained persistently in the severe range at presentation to L&D triage, 163-171/93-101
- Resident promptly admitted patient and considered IV vs PO medications and ultimately chose to initiate Procardia 30 XL and MgSO4 for seizure prophylaxis
- Betamethazone administered
- 24h urine collection begun
- BP responded (mild range) with Procardia

Case 2 (cont)

- 24 h urine returned elevated, 461mg, up from baseline study 2 days prior of 124 mg
- Toxemia labs were WNL upon admission and patient had a transient elevation of LFT’s on HD3.
  - AST 64 ALT 50, on admission 21 and 13, respectively
- When MgSO4 was discontinued at Betamaturity the patient was transferred to the antepartum floor with a diagnosis of chronic hypertension with superimposed severe pre eclampsia.
- Sonogram was performed showing a fetus in the 18% with AV & HC < 1%, elevated UA dopplers.
- MFM recommended expectant management until 37 weeks
- On HD 4 patient was stable for DC with VNA, weekly NST, BPP and evaluation by OB physician.
  - LFTs normalized prior to DC

Readmission

- Patient was compliant with NST, BPP and office visits
  - NSTs reactive
  - BPs WNL
- @34w2d BPP 6/10 (AFI of 1.8 cm and NR NST) in addition to elevated BP 158-166/82-109
- Sent to L&D for IOL
Hospital Course

- Patient had not taken AM dose of Procardia prior to arrival for BPP.
  - Therefore decision was made to give home Procardia dose, which was approx 3 hours overdue and observe for additional antihypertensive requirement
  - MgSO4 started for seizure prophylaxis
  - Toxemia labs sent
- Cervidil IOL @1150 AM
- FHT primarily Cat II with brief periods of Cat I
  - Recurrent late decelerations, minimal variability and deep variable decelerations
- Recommended Cesarean section @1935 for persistent Cat II FHT remote from delivery
- Patient agreed, informed consent obtained, Cervidil removed and prepared for surgery

Hospital Course

- Cesarean section performed without complication with MgSO4 continuing throughout
- Baby: Female weighing 1280g, APGARs 7/8, no intubation required. Still currently in NICU, doing well
- Patient maintained on MgSO4 for seizure prophylaxis for 24h post operatively

Hospital Course

- Postpartum course uncomplicated
- BP well controlled with Procardia 30XL
- VNA continued and patient instructed to follow up weekly in office for assessment