HELLP SYNDROM:DIANOSIC AND MANAGEMENT

BSCKII TRƯƠNG QUỐC VIỆT

Từ Dũ HOSPITAL

- Total of delivery every year 50.000 cases
- High risk pregnancy 4000-5000 cases
- 2010 : 36 cases with Hellp syndrom in ICU
- Almost from other hospital with severe prognotic

CASE CLINIC

Name:NTT 32t 2001 from TG hospital

- 2g 10/11 fatigue ,pain in hypogastric, headache, dizze , BP 200/110mmHg(treatment MgSO and Nicardipine)
- 7g55 BP 80/60 pale, placental abrupt and cesareran delivery with hyterectomy subtotal, bleeding lost 1200ml after that there is coagulation disorder
- 17g tranfer to TUDU hospital

HELLP SYNDROM

- 20g : pale , sweeting , drainage 200ml red blood. BP 129/94mmHg Pulse 106l/p
- AST 1719 ALT 1062 Bili TP 56 PT 55% TQ 18” .Echo :many solution in abdominal
- Treatment :Albutein, Fresh frozen plasma and Cryoprecipitate
- 22g hystrectomy total, ligation hypogastric artery, drainage
- 2g awake,BP 186/104mmHg

- 8g abdominal ph ùh , liver 3-4 cm
- AST 4863, ALT 2704 PT 68% platelet 60.000
- Echo Dịch ổ bụng gan to mật độ không đều ,phù nề bao gan , chọc dò 5ml máu không đông
- Tranfusion fresh frozen plasma and Cryoprecipitate

- 12g BP 150/90mmHg. Pulse128 l/m ,Hct 28% Hb 9g
- 14g Repeat surgery 600ml blood not coagulation from hematome of broken sudcapsule hepatic .Suture hematome
- 20 g Tranfer to ICU Choray hospital to continue management

HELLP SYNDROM :defination

- 1982 Weisntein was the first
- Hemolysis: elevated bilirubinemia,high LDH, schzocytes, haptoglobin
- Elevated liver enzim :ASAT and ALAT > normal
- Low platelet : < 150 G/L

HELLP SYNDROM :epidimiology

- Complication of 10-20% severe preeclampsia, high mortality maternal
- Almost were dianogsic 28 - 36 week of pregnancy
- Mortality maternal : 0-24%
- with 70% of preterm

- Sibai BM, Ramadan MK, Usta I v à cs. Am J Obstet Gynecol 1993; 169:10

- High risk of DIC: placenta abruption, acute failure renal, respiratory failure, OAP, liver rupture, sepsis
- Increase ratio dead fetal
- Later stages of pregnant 70% and after birth 30%.

- Sibai BM, Ramadan MK, Usta I và cs. Am J Obstet Gynecol 1993; 169:1000

HELLP syndrome : pathophysiology

- The exact cause of HELLP is unknown
- But general activation of the coagulation cascade is considered the main underlying problem.
- Fibrin forms crosslinked networks in the small blood vessels. This leads to a microangiopathic hemolytic anemia: the mesh causes destruction of red blood cells as if they were being forced through a strainer.
- Additionally, platelets are consumed. As the liver appears to be the main site of this process, downstream liver cells suffer ischemia, leading to periportal necrosis.
- Other organs can be similarly affected. HELLP syndrome leads to a variant form of disseminated intravascular coagulation (DIC), leading to paradoxical bleeding, which can make emergency surgery a serious challenge.

Hellp syndrome : DIAGNOSTIC

- Difficult in diagnostic
- Bilirubin > 1,2 mg / dL
- Hemolytic LDH > 600U/l
- Elevated liver ennzym AST > 70U/l
- Low platelet count < 100.000/mm3

- Weinstein L: . Am J Obstet Gynecol 1982; 142:159-167
- *Sibai BM. Am J Obstet Gynecol 1990;.*

Hellp syndrome: low platelet count

- Martin present 3 degree:
- Degree 1 : PC < 50.000
- Degree 2 : PC 50.000 – 100.000
- Degree 3 PC 100.000 – 150.000

Hellp syndrome : Low platelet count

- Low platelet count is complication most frequent of pre-eclampsia and HELLP syndrome
- 18% cases. .
- Low platelet count association with severity of pre-eclampsia
- Sibai B: Pregnancies, 5th edition.. Philadelphia: Churchill Livingstone; 2007:864-912
- Platelet count < 50.000 / mm3 → high risk hemorrage Douglas M: : Blackwell blishing; 2005:165-177.
- Most of case low platelet count reserve after birth, rare contiunue decrease

HELLP syndrome : Presentation

- Epigastric or right upper quadrant pain
- Nause or vomissemment
- Ictere, ascite
- Headache
- Visual disturbance
- Proteinuria
- Purpura

Hellp syndrome : treatement

- Delivery when HELLP syndrome manifests beyond 34 weeks' gestation
- CS immediate in cases: nonreassuring fetal status, eclampsia, placental abruption, platelet count < 50.000 mm3, severe hypertension, DIC, liver infarction or hemorrhage.
- Administration of corticosteroids to accelerate fetal lung maturity if < 34 week's (bethametasone 12mg IM and use after 24h)

HELLP SYNDROME: treatment

- Observation in ICU in 24-48 h
- Clinical management is similar to that for severe preeclampsia, includes:
  - intravenous magnesium sulfate for seizure prophylaxis
  - antihypertensive medications to maintain a systolic blood pressure below 160 mm Hg and a diastolic blood pressure below 105 mm Hg
- The first priority is to assess and stabilize the maternal condition, with particular attention given to hypertension and coagulation abnormalities.
- The fetal condition should be assessed with FHR monitoring, Doppler ultrasonography of fetal vessels, and/or a biophysical profile

- Sibai BM: Obstet Gynecol 2004; 103:981-991.

HELLP SYNDROME: TREATMENT

- Most of cases reserve completely in 24-48 h after birth.
- Some case continue until 14 days after birth
- Most of cases, platelet count become normal after 5 days after birth.

Treatment decrease platelet count

- A systematic review by Douglas[213] proposed a platelet count threshold of 80,000/mm3 as adequate for the administration of neuraxial anesthesia in pregnant women without other risk factors.
- **Douglas M: : Blackwell blishing; 2005:165-177.**
- Transfusion platelet when platelet count < 40.000 / mm3 and patient have CS Transfusion 6-10 units platelet
- **Barton J, Sibai B: . Clin Perinatol 2004; 31:807-833.**

HELLP SYNDROME: Complication

- Liver complication :
  - Subcapsular liver hematoma ,
  - Rupture of a subcapsular hematoma of the liver
- Other complication
  - PPH, DIC
  - OAP, eclampsia
  - Renal failure, Placental abruption
  - Fetal distress
  - Dead fetal and maternal

TỪ DŨHOSPITAL

Signs	Sibai (2003) %	Từ Dũ (2010)%
Hypertension	82-88	86,2
Epigastric or right upper quadrant pain	**40-90**	**24,1**
Nausea / vomiting	**29-84**	**6,8**
Headache Visual disturbance	**33-61** **10-20**	**58,6** **13,8**

TỪ DŨ HOSPITAL

- Coagulation disorders 28 cases (73,3%)
  - TQ > 14 s : 13 cases (43,3%)
  - TCK > 41 s: 2 cases (6,6%)
  - TQ + TCK prolong: 7 cases (23,3%)
  - Platelet count
    - < 60 000 /mm3: 13 cases (43,3%)
    - 60000 - 100000 /mm3 : 19 cases
    - 100000 - 150000 /mm3 : 4 cases

TỪ DŨ HOSPITAL

- 83,3% cases have coagulation disorder, most of cases is decrease platelet count
- 43,3% cases PC < 60000, abnormal TQ 43,3% and TCK 6,6% → difficult in obstetric treatment.
- 1 case have AST, ALT increase > 10.000UI, 2 cases renal failure, 1 case DIC , 2 cases liver rupture.

TỪ DŨ HOSPITAL

- Time patient impared symptoms 11,48 ±19,4 giờ (2 h - 96 h)
- Delivery at time : 33,38 ± 4,4 w (23 - 40 w)
  - < 34 weeks: 55,17%
- Transfusion RBC or products of blood 86,7%
  - Transfusion RBC 13,3% , 2,5 ±1 U RBC
  - Transfusion platelet 80% , 7,1±4.3 U P
  - Transfusion FFP 7%, 6±5 U

TỪ DŨ HOSPITAL

- AST, ALT nomal after 4 ± 1,8 day, platelet normal after 4.3 ± 1.7 day.
- Normal: 28 cases
- Dead: 2 cases (2 cerebrovascular accident)
- Trasfer: 6 (2 hemodiafiltration, 2 liver rupture (1dead),1 DIC(dead))
- Day hospitalizer: 7,9 ± 2,7 day

Case

- Mrs HTKS 19 age, Tây Ninh
- Tay Ninh hospital transfer at 12h 28/08 with diagnostic: nulliparity 39w – hyperthermie, low platelet count, AST, ALT high
- Alert , HA 120/80mmHg M100 l/p, no purpura
- 14g CTG and suspect HELLP syndrome
- 16g30 HC 5.32 Hct 46.4 Hb 15.6 TC 65 uremie 2+
- AST 1553 ALT 680 Bili total 32.16 Acid uric 489 , Urobilinogen ++
- 17g Petechial fever (rapid test) : Dengue NS1Ag (+) Dengue IgM (-) dengue IgG (-)

- 17g trasfusion platelet and discuss with hepatologist CR hospital → acute hepatitis → use Fortec 25mg 6 table/day + Arginin 2 table/day Hepamic with glucose IV
- 23g ictere, urine 800ml , BC 16.2, HC 5.56 Hb 16.3, Hct 48.2, TC 55000

29/8

- 2g BC 14.4 HC 5.81 Hb 17.1 Hct 50.1 TC 52 PT 64 INR 1.34 TQ 16.2 Fifrinogen 307 TCK 40 → trasfusion platelet 6 U
- 6g BC 20.97 HC 5.64 Hb 16.5 Hct 48.8 TC 50 , delivery vaginal, HA 120/60 mmHg
- 11 g alert , nausea brown liquid
- 18g Acid uric 745.5 (150-360) AST 2859 ALT 1104 BILI total 62.2 Kali 5,7 Natri 125 , liquid, Rocephin ,amikacin, vit k

and 30/8

- 7g patient talk slow, tired, T 38,2 ; M 152l/p Acid Uric 853.8 ALT 2647 Bili total 79.97 CRP 65.1 BC 38.5 HC 4.27 Hb 12.1 TC 25 PT 11 (70-100) INR 7.84(1-1.3) TQ 61.6 Fibrinobenm 94 TCK 60.1
- Transfusion platelet, 6 FFP and v à 4 cryptoprecipitate
- 8g30 Sepsis/ Pethchial fever, blood culture and transfer and discharge at Nhiệt Đới hospital
- 9g dengue NS1 Ag (-) Dengue IgM (+) Dengue IgG (+) Procalcitonin (-)

CONCLUSION

- Need monitor HELLP syndrome in patient with symptom epigastric or right upper quadrant pain or vomiting, renal failure
- Headache, visual disturbance Hospitalizer and use FFP, cryptoprecipitate, platelet
- Delivery