CASE SCENARIO-I

CASE PRESENTATION

• **Chief complaints**: An unbooked case –
Primigravida with H/O 8 months of ammenorhea
Perceving good fetal movements
c/o of sudden onset of pain abdomen which was continous and mild bleeding per vagina and she even complained of giddiness since two hours
Reported to the labour room on 15/6/2015 at 9:45 pm

- History of present illness:

Patient was apparently asymptomatic two hours before,
She suddenly developed bleeding p/v , assosiated with pain abdomen, bleeding was mild, used only one pad that is minimally soaked and it was fresh bleed ,complains of giddiness also

No h/o similar complaints in earlier weeks

No h/o tightness and No h/o draining p/v
No h/o white discharge
No h/o burning micturition
No h/o headache, nausea, vomiting,
blurring of vision, decreased urine output

- Menstrual history:

Attained menarche at 14 yrs

Regular cycles – 30 days duration

Normal flow for 3 to 4 days

Not associated with pain or clots

LMP-22/10/14

EDD- 29/07/15

POG- 34 wks

Marital history

- 18 months of married life
- Non consanguinous marriage
- No h/o OCP usage
- No h/o infertility treatment

Obstetric history

- Conceived after 1 year after marriage

1st Trimester: uneventful,

- Pregnancy diagnosed by Upt
- Dating scan not done
- No h/o vomitings, fever, bleeding p/v,
- No h/o radiation or teratogenic drug exposure

- **2nd Trimester** :
- Quickening @ 5 mnths
- Taken 2 doses of TT @ 5 mnths & 7 mnths
- Taken IFA & Ca supplementation irregularly
- No h/o bleeding p/v , no h/o headache/ blurring of vision/ pedal edema/ d
- **3rd Trimester** : uneventful till date developed above said symptoms

Past history

- Not a k/c/o DM, HTN, TB, Asthma, epilepsy, thyroid , heart disease
- No h/o blood transfusion
- No Past surgical history

Personal history

- Mixed diet
- Sleep , appetite – normal
- Bowel , bladder habits –normal& regular
- No addictions

Family history

- No h/o DM, HTN, TB, Asthma, Epilepsy, Thyroid, Heart disease, in the family

- **Drug history** : no h/o drug allergy

Investigations : with the patient on admission (Previous reports)

B positive

Hb – 8.4gms %

TC : 10,000/ cumm

Platelet count : 3 lakhs/cumm

Obstetric scan :

twin gestation corresponding to gestational age 24 weeks

dichorionic and diamniotic both placentae anterior, upper segment, fundal grade 2

QUESTIONS

1. WHAT ARE THE DIFFERNTIAL DIAGNOSIS BASED ON HISTORY AND PREVIOUS REPORTS OF THE PATIENT?

DIFFERENTIAL DIAGNOSIS

- PAIN ABD
  - PRETERM LABOUR
  - FALSE LABOUR PAINS
  - ABRUPTION
- GIDDINESS; PREECLAMPSIA
  - ANAEMIA
- BLEEDING PER VAGINA
  - ABRUPTION
  - LABOUR
  - PLACENTA PREVIA

CASE SCENARIO-II

General examination

- Pt conscious, coherent, cooperative
- Moderatly built & nourished
- Mild pallor present no icterus/ cyanosis/ clubbing/ koilonychia/ pedal edema/ lymphadenopathy
- Thyroid, breast, spine – clinically normal

VITALS

- Afebrile RR 18/min
- PR – 88/min, regular , normal volume
- BP – 130/90mm of Hg, in right arm, sitting position

SYSTEMIC EXAMINATION

- CVS - S1 S2 heard, no murmurs heard
- RS - BAE+, normal vesicular breath sounds heard, no added sounds

Obstetric examination

Inspection : abdomen is over distended ,umbilicus streached stria gravidarum , linea nigra seen, all hernial sites are normal , no engorged veins seen

- ***Palpation*** :
- abdomen is , tense non tender
- fundal height- uterine ht more than period of gestational age
- Fundal grip-one fetal head made out in the fundus with difficulty

- Umbilical grip-multiple fetal parts felt with difficulty
- Two fetal heart sounds heard.

Local examination : external genitalia are clinicaly normal

Per speculum examination no active bleeding seen very minimal bleeding was present

Per vaginal examination :

cervix soft mid position 30% effaced and 2cm dilated. Show present

- WHAT IS YOUR PROVISIONAL DIAGNOSIS BASED ON CLINICAL EXAMINATION?

– Primigravida with 34wks gest with twins with polyhydramnios with anaemia with PIH in preterm labour.

Investigations : done in the hospital on admission

- B positive
- Hb – 8.5g%
- TC : 7,400 cumm
- Platelet count : 2.67lakhs/cumm
- BT CT , PT aPTT : WNL
- CUE : Normal study
- RBS : 82 mg/dl
- HIV, HbsAg, VDRL – non reactive
- LFT,RFT ;WNL FUNDOSCOPY ;normal

Obstetric scan :

twins -twin A 32 weeks 4 days of gestational age 1.1kg efw dichorionic and diamniotic breech

-twin B 34 weeks of gestational age 1.4kg efw transverse lie

Placenta : both anterior, upper segment, fundal grade 2-3

Amniotic fluid index: 20-21cms

QUESTION

What are the haematological changes in pregnancy?

HEMATOLOGICAL CHANGES

BLOOD VOLUME

MARKEDLY INCREASED

STARTS RISING -1OWKS

MAX -30-32WKS

STATIC TILL TERM

SLIGHT DECREASE DURING LABOUR

RETUNS TO NORMAL-4WKS PPM

PLASMA VOLUME

PARALLELS BLOOD VOLUME

NON PREGNANT—2500ML

INCREASES TOWARDS THE END OF1ST TRI

MAX -30-34WKS

PLATEAU FOR LAST 8WKS

INCREASE IS MORE IN TWINS

INCREASE IS LESS IN IUGR

RED CELL MASS

INCREASES FROM END OF 1ST TRI-TERM

INCREASE IS BY 33%

DECREASES AFTER DELIVERY

REACHES NON PREGNANT LEVEL BY 3WKSPPM

MORE IN MULTIPLE GESTATION

HEMODILUTION OF PREGNANCY

INCREASE IN PLASMA VOLUME IS MORE THAN

RBCS

ADVANTAGES

DECREASED BLOOD VISCOSITY

ENSURES GAS EXCHANGE BTW MATERNAL &FETAL CIRCULATION

PROTECTION OF MOTHER AGAINST ADV EFFECTS OF BLOOD LOSS DURING LABOUR

- WHAT IS YOUR PROVISIONAL DIAGNOSIS BASED ON CLINICAL EXAMINATION AND INVESTIGATIONS?

Primigravida with 34wks gest with twins with polyhydramnios with mild anaemia with gestational hypertension in preterm labour.

- What complications you anticipate in this case?

DURING PREGNANCY

- ANAEMIA/TWINS
  preterm labour
  Preeclampsia
  Early rupture of membranes
  cord prolapse

GEST HTN
preeclampsia,eclampsia
abruption

DURING LABOUR

- EARLY RUPTURE OF MEMBRANES
- CORD PROLAPSE
- DELAYED DELIVERY OF SECOND TWIN
- PPH

CASE SCENARIO-III

Treatment

Strict FHR monitoring done with NST

- Monitoring of PR, BP, Temp
- Monitoring for uterine contractions was done
- Inj. Betnesol 12mg stat dose given.
- Blood was reserved.

Emergency LSCS was done at 12:00am on 04-03-2015.

Intra op findings

- Lower segment well formed
- Bladder normal in position
- Liquor clear and excess
- Delivered an alive male baby of wt 1.5 kg , apgar 8 and 10 and and female baby of weight 1.2 kg transverse and converted to breech and extracted

Placenta both fundal and anterior

After the delivery of placenta
Uterus was soft and bleeding of more than 500ml
Was seen
Even after massage the uterus was not retracting
Oxytocin drip was started
Prostaglandin was given intra muscularly and intra myometrial.
Issue of blood requested.
Blood was immedietly sent for CBP
Report showed --- hb 5.4 gms
tc 11000
1.2 lakh platelet count

QUESTIONS

- What is Hemostasis & What are the mechanisms of Hemostasis?

Hemostasis means prevention of blood loss whenever a vessel is severed or ruptured .

Hemostasis is achieved by several mechanisms

1) vascular constriction

2)formation of platelet plug

3)formation of blood clot as a result of blood coagulation

4)eventual growth of fibrous tissue into blood clot to close the hole in the vessel permanently

QUESTION

- What do you mean by Circulatory shock?

Circulatory shock means inadequate blood flow through the body ,to the extent that the body tissues are damaged ,especially because of too little oxygen and other nutrients are delivered to the tissue cells.

Hemorhage is the common cause of hypovolemic shock

QUESTION

- Whar are stages of shock?

Stages of shock

1. Nonprogressive stage
2. Progressive stage
3. Irreversible stage

QUESTION

- What are the Compensatory mechanisms in shock?

Compensatory mechanism in non progressive shock

1. Baroreceptor reflexes
2. Central nervous system ischemic response
3. Renin angiotensin mechanism
4. Increased secretion of ADH
5. Increased secretion of epinephrine and norepinephrine from adrenal medulla
6. Other mechanisms that return the blood volume to normal

QUESTIONS

- How do you estimate blood loss in delivery?

Blood loss estimates at delivery

Circulatory blood volume increase during pregnancy **70 ml/Kg BW → to 100 ml/Kg BW**

(TBV = 6 to7 litres)

Estimated blood loss

- **Normal vaginal delivery 500ml**
- **Cesarean section 1000 ml**

Actual blood loss

usually double the estimated blood loss

QUESTION

- What are the aims of Transfusion Therapy?

Aim of Transfusion Therapy

- ✓**Assist in stabilizing blood volume**
  - *Crystalloids and colloids have short-half-life*
- ✓**Improve tissue oxygenation**
  - *Red cells*
- ✓**Ensure adequate haemostasis**
  - *FFP*
  - *Platelets*
  - *Cryoprecipitate*

QUESTION

- How much urgent is the need of blood?

How urgent is the blood?

Estimated blood loss (ml) (% blood volume)	Degree of urgency	Request
500-1000 (10-20%)	Standby	Standard cross match of 2 units
1000-1500 (20-30%) blood loss controlled	Urgent (blood within 1hr – 30mins)	Urgent cross match of 6 units
1000-1500 (20-30%) actively bleeding and 1500-2500 (30-40%)	Very urgent (blood within 30 min - 10 mins)	6 units type-specific / un-crossmatched blood
>2500 (>40%) or above with no response to fluid resuscitation	Emergency (immediate)	2 to 4 units O negative blood followed by type specific

QUESTION

- Why avoid fresh whole blood transfusion?

Why avoid “fresh whole blood”?

DISEASE TRANSMISSION:

1.Syphilis & Malaria transmission: *Treponema and Malarial parasite* cannot survive > 96 hours in stored blood

2.Intracellular pathogens: Viruses like CMV, HTLV survive in WBC in fresh blood

IMMUNOLOGICAL COMPLICATION :Due to WBC in fresh blood.

- TA-GvHD
- TA-immunomodulation, Alloimmunization

QUESTION

- What transfusion rate is needed?

Transfusion Rate

- Packed cells have to be transfused within an hour and a maximum of 4hours
- FFP and Platelets within 30minutes

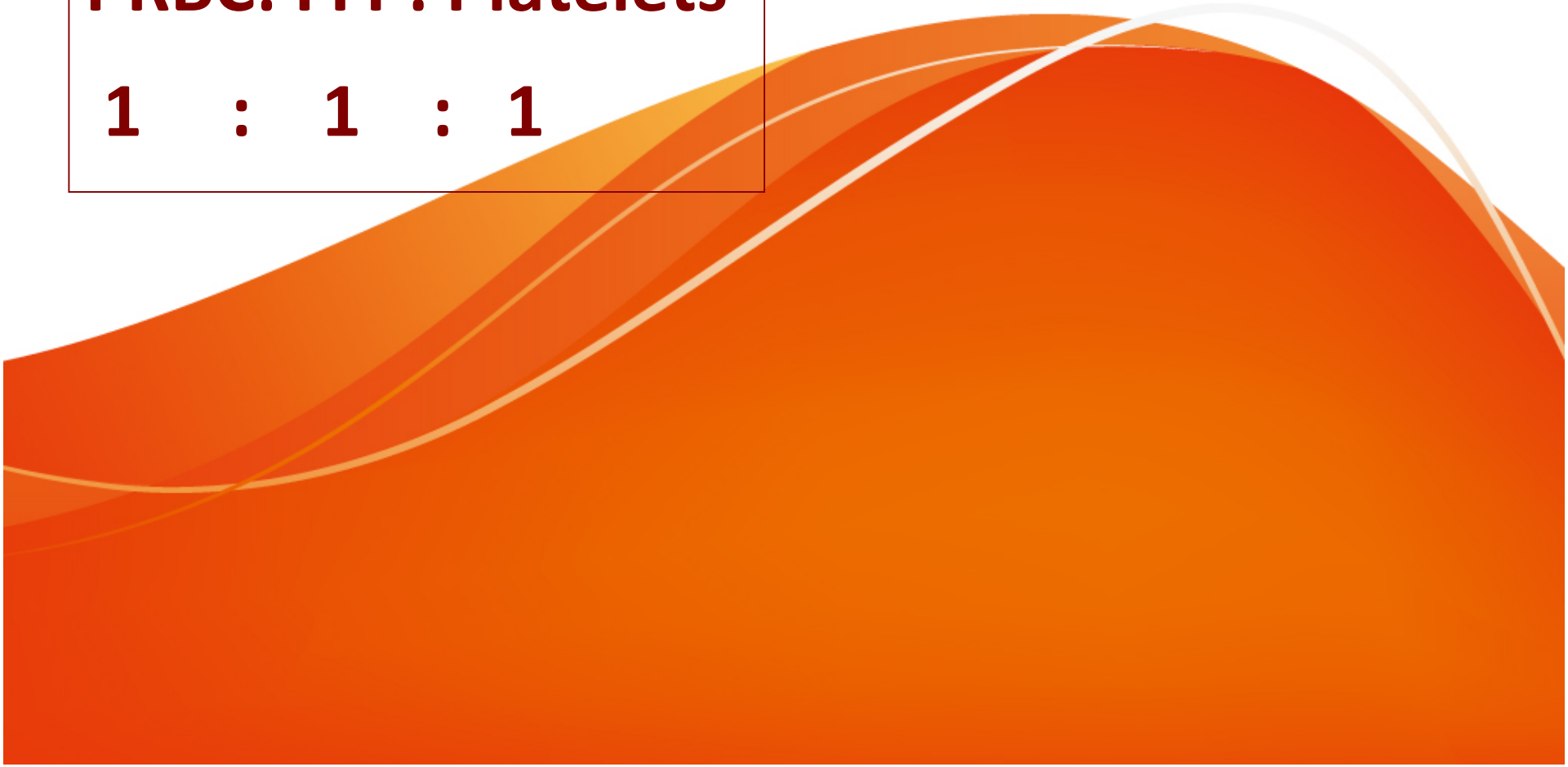
QUESTION

- Ideal ratio of blood products in obstretic haemorrhage?

What is the ideal ratio in Obs hemorhage?

PRBC: FFP: Platelets

1 : 1 : 1



QUESTION

- What is definition of PPH?

DEFINITION

- Any blood loss that has potential to produce or produces haemodynamic instability.
- Blood loss >500 ml after vaginal delivery or >1000 ml after caesarean/1500 ml following obstetric hysterectomy
- Miid:500-1000ml
- Moderate:1000-2000ml
- Severe:>2000ml

QUESTION

- What are the causes of PPH?

CAUSES OF PPH

- TONE 70-80%
- TRAUMA 20%
- TISSUE 10%
- THROMBIN 1%

QUESTION

- How will you manage PPH?

MANAGEMENT OF PPH

- Call for help
- Rapid evaluation of vitals
- Oxygen by mask
- Bimanual uterine massage
- Oxytocin 10 u IM
- 2 large IV cannula ,send blood for cross matching
- IV FLUIDS RL/ DNS
- Cathetrise the bladder
- Check the placenta
- Explore cervix and vagina

- Site 2 Large bore (16G-gray color) IV cannula
- Infuse IV fluid - NS / RL - run it fast
- Catheterize bladder
- Check the placenta -
  - Is it expelled
  - If it is expelled, re examine & make sure it is complete
- Examine vagina, perineum and cervix for tears

Step 2-DIRECTED THERAPY

IMMEDIATE PPH-PALPATE UTERUS

Drugs	Dose & Route	Maintenance dose	Max dose	Frequency	Precautio CI
Oxytocin	IV infusion 10U/500 ml 60 dpm	IV infuse 10U/500 ml 40 dpm	Not more than 3 lt/	-	
Ergometrine / Methergin	IM / slow IV of 0.2 mg	0.2mg after 15 min.	5 doses (1mg)	4th hourly	PIH, HT Heart disease.
15 methyl PGF2α or Misoprostol	IM 250 ug PR 800 mcg	250 ug after 15 mins	8 doses (2mg)	15-90 mnts	Asthma, heart disease

THANK YOU