MASSIVE OBSTETRIC HEMORRHAGE—

HOW TO TACKLE?

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OBSTETRICS

Massive Obstetric Hemorrhage
What is it??

- Blood loss from uterus or genital tract >1500ml
- Fall in Hemoglobin > 4g/dL
- Acute transfusion > 4 units blood
- Any blood loss seriously compromising life of patient

Massive Obstetric Hemorrhage

- Blood loss may be:

– Antepartum:
  - Placenta previa
  - Abruptio placentae
  - Uterine rupture

– Postpartum
  - Uterine atony
  - Retained products
  - Genital tract trauma
  - Uterine inversion
  - Coagulation disorder

Massive Obstetric Hemorrhage

Blood loss notoriously difficult to assess in Obstetrics----

- May be concealed
- Presence amniotic fluid makes accurate estimation challenging
- Hypotension is a late sign in the parturient as the compensatory mechanism has a large leeway

Extreme Haemorrhage: Type of Delivery—Meta analysis

normal vaginal	20%
instrumental vaginal	8%
elective caesarean	13%
emergency caesarean	50%

ASSESSING SEVERITY

Loss in ml	Appearance	MAP	Heart Rate	Respiration
500-1000	Normal	80-90	<110	normal
1000-1500	Clammy, sweating	60-80	120	tacchypnea
1500-2000	Clammy, collapsed	50-60	thready	shallow
2000-2500	Unconscious	<40	Unrecorded	Air hunger, gasping

APPROACH TO SEVERE HEMORRHAGE

- Anticipate
- Prepare
- Recognize and resuscitate
- Mobilize assistance
- Communicate
- Diagnose
- Delegate and Intervene

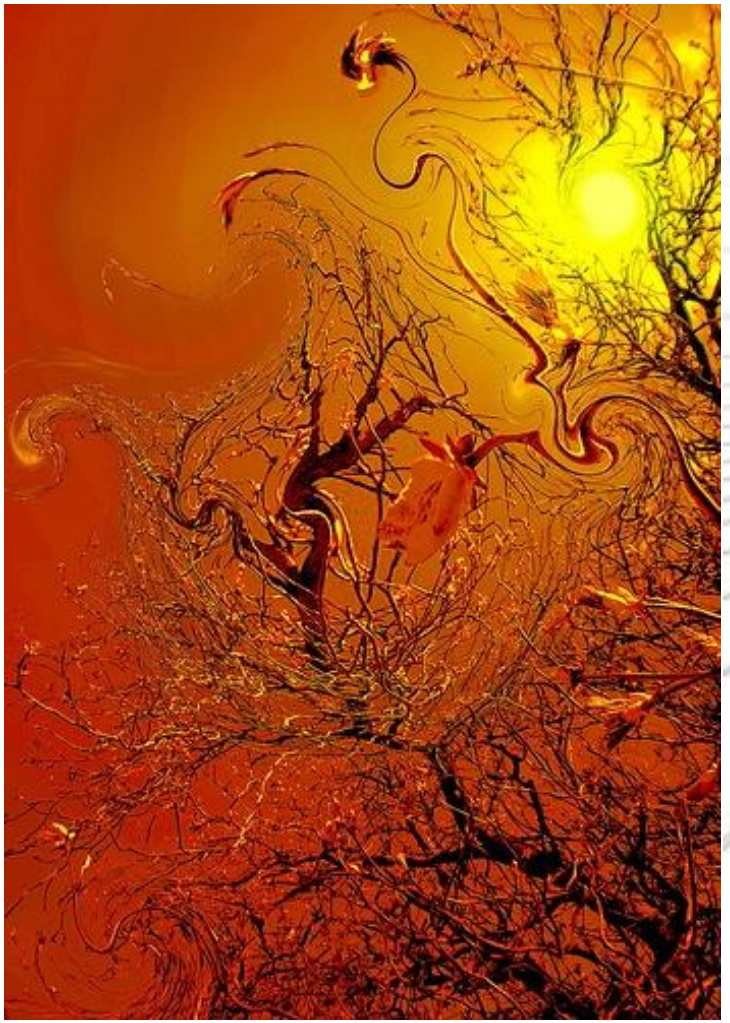
RESUSCITATION

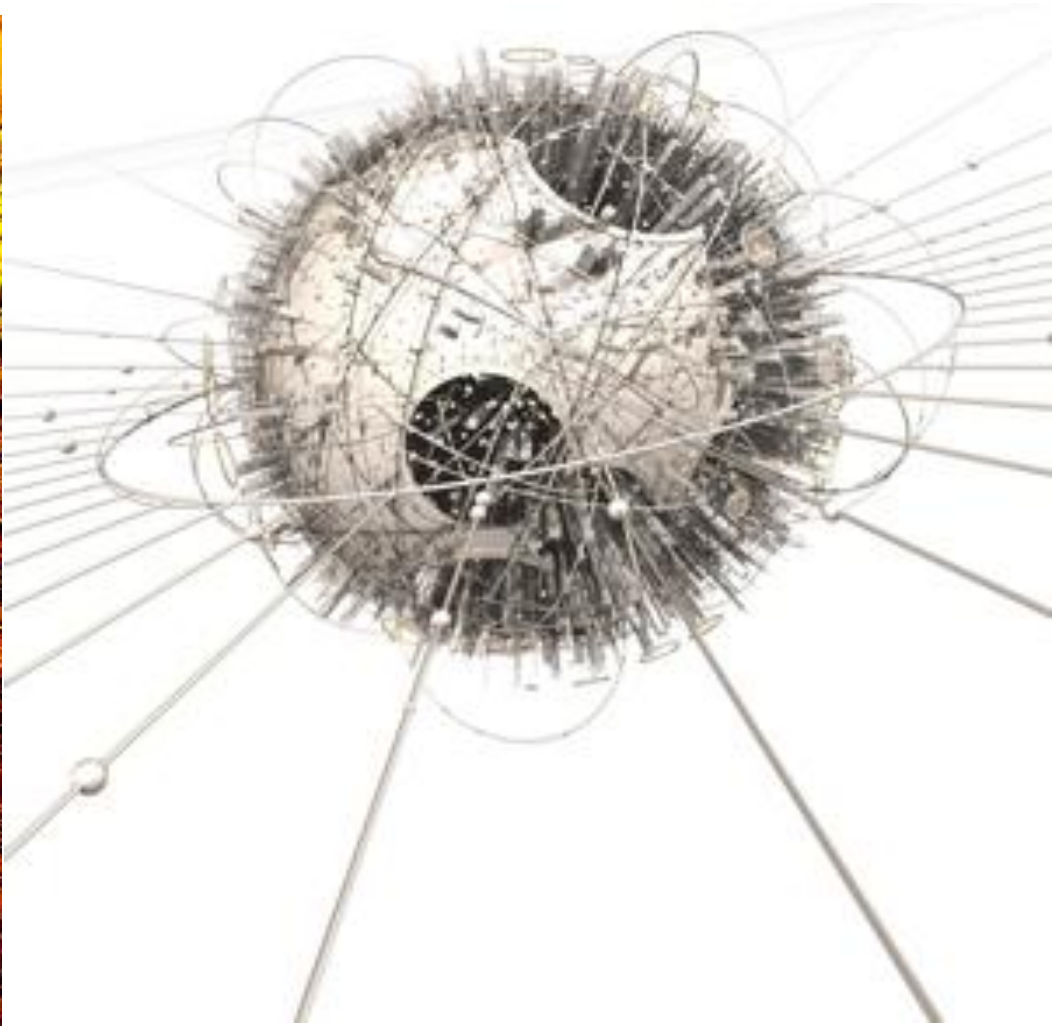
- High inspired oxygen
- Left lateral tilt if antepartum
- Adequate venous access (2), central line with Rapid infuser kit
- Pressure bags
- Crystalloid or colloid until blood available
- Replace blood; 1:1 if using colloid; 3:1 for crystalloid
- Vasopressors to maintain BP until circulating blood volume restored

Situation is a Count down in reverse

- Very clear about Management guidelines
- **ASK FOR HELP**
- Time in hand
- Resource setting
- Inform relatives
- ICU shift
- SOS shift with precaution to tertiary setting

MANY COMPLEXITIES IN Rx





WHAT TO DO IN A CRISIS

- Call for **HELP**
- Keep cool and follow the prescribed drill
- Central Line or second vein secured
- Send blood for investigation and matching
- Elevate legs
- Oxygenate and monitor, check saturation
- Crystalloid infusion along with colloid and blood
- Catheterize and again look for bleeding, its source, color and quantity
- Medical management in case of atony or coagulation defect
- Pack where indicated
- Surgical Intervention at the earliest

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...WHAT TO DO IN A CRISIS

- Shift to Maternal intensive unit (MICU) / OT
- Involve Intensivist, Hematologist, Anesthetist and importantly an experienced Obstetrician
- Inform relatives and take high risk consent for required intervention
- Assess shock component
- Keep coagulopathy in mind and take immediate action to prevent cascade effects
- Blood component transfusion as per reports
- Strict input-output chart as per CVP
- Decide on intervention

ASSESSMENT IN ANTEPARTUM PATIENT

- Categorize the severity of shock P/BP/Respiration
- Uterine tone, contractions, fetal heart
- Irrespective of gestational age and plan immediate delivery (Cesarean) in morbid bleeds
- Have support mechanism in place
- Delivery should be done in OT
- NICU care
- ICU care for the mother

ASSESSMENT

- In post vaginal delivery look for ----

  -Situation ,size and consistency of uterus

  -Absence think of inversion

  -Full bladder (catheterize)

  -Color, quantity of bleed, whether clotting or not

  -In case of atonia vigorous medical management

  -Packing of vagina in case of trauma till surgical management possible

INTERVENTION

- Reassess pt. by checking vitals and source of bleeding and R/0 coagulopathy
- In ante partum patient delivery is a mandatory for massive hemorrhage and decision based on clinical condition of patient (the route as per diagnosis)
- High risk consent with seriousness
- Consent for Cesarean hysterectomy taken with clear risks explained to relatives

MEDICAL MANAGEMENT

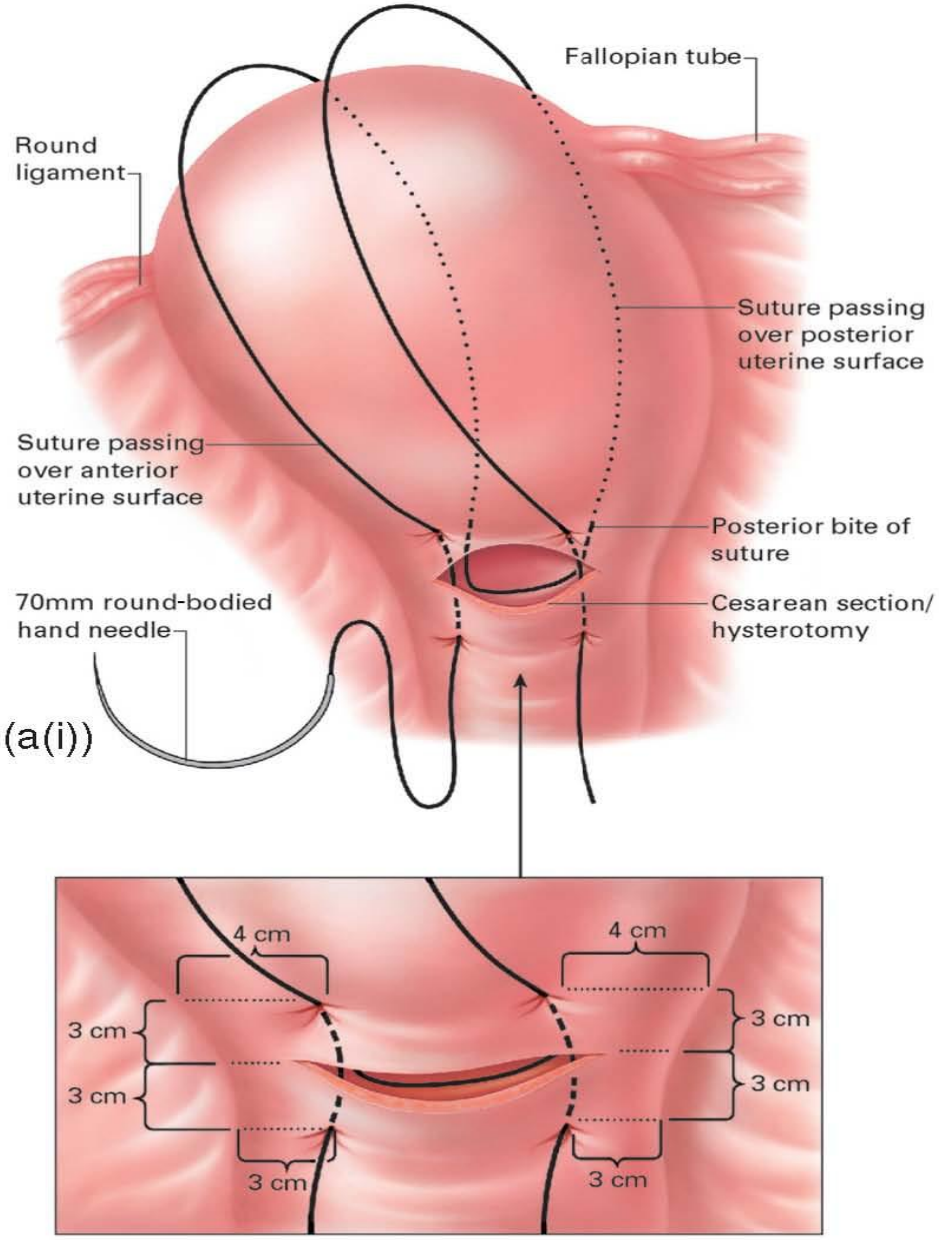
- Uterine massage alongwith
- Use of oxytocics
- Methylergometrine
- Misoprostol
- Prostodin
- Combinations of above
- Fluid and blood transfusion

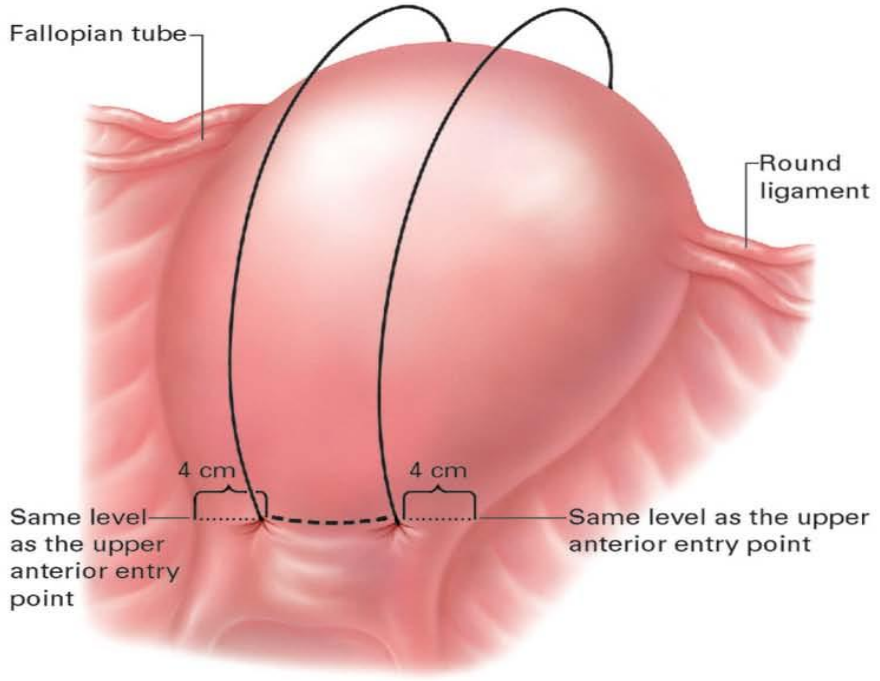
MEDICAL MANAGEMENT OF DIC

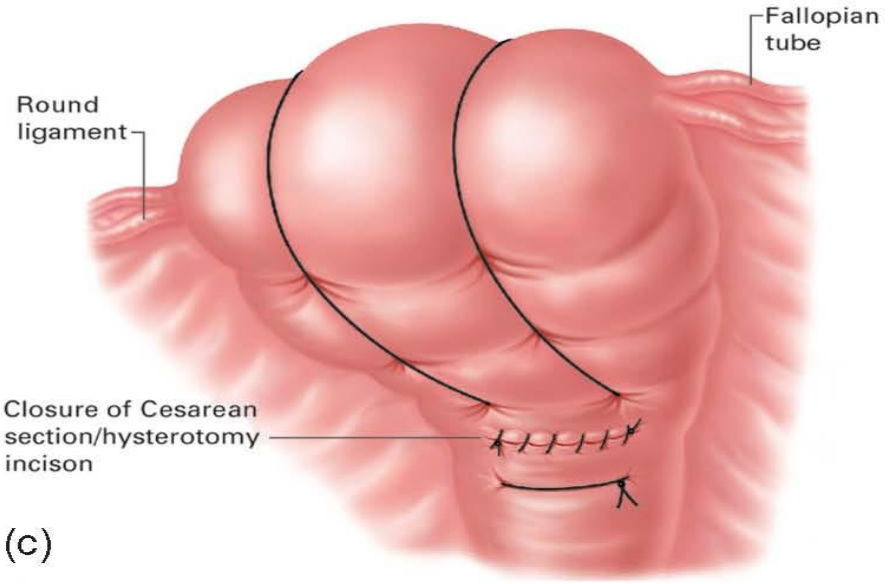
- Keep DIC in mind when bleeding is excessive, it may result in cascade effect, and hence early intervention before patient destabilizes
- Important investigation: Hemogram, PT-INR, Plasma fibrinogen, fdp, PTTK and any other
- Fresh frozen plasma with PCV fraction
- Involve hematologist earlier
- Higher antibiotic
- Careful assessment before attempting surgical intervention
- High mortality

SURGICAL MANAGEMENT OF PPH

- Exploration under anesthesia with suturing of lower genital tract lacerations
- B-Lynch sutures, other tourniquet sutures
- Specific uterine Artery ligation
- Internal Iliac ligation
- Hysterectomy- sub total / total



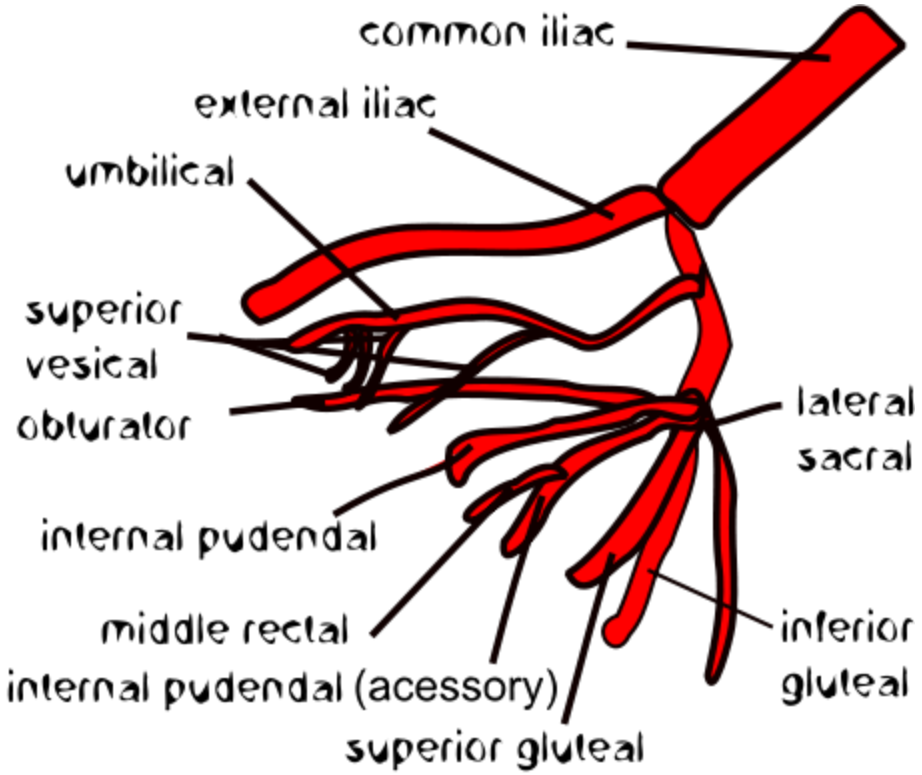




MANAGEMENT OF INVERSION

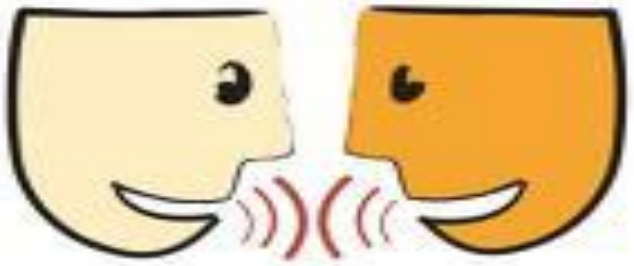
- Look for inversion
- Shock out of proportion of blood loss
- Seldom massive hemorrhage
- Immediate reposition should be attempted by a trained obstetrician------if failed
- Shift to OT with due preparation for reposition under relaxant anesthesia
- Failure, then laparotomy and other standard methods done

PELVIC ARTERIAL ARCADE



COMMUNICATION

- Always remember to communicate clearly with relatives and keep discussions solemn.
- Be clear and don't vacillate
- Show empathy and concern
- Be patient in cases of handling difficult relatives




...AND THAT IS WHY WE LIFT ON THREE...
COMMUNICATION
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DOCUMENTATION

- All important events to be chronicled
- Effectively writing about criticality especially when patient arrives or deteriorates
- Be concise and precise
- Fluid balance chart
- Assessment of loss should not be vague

IN CONCLUSION.....

- Massive hemorhage occurs in 1-3% of obst cases
- 90% is postpartum
- Early recognition is important
- Atonia is a common cause but laceration can occur concomitantly, and hence should explore adequately with good exposure (anesthesia), and vision
- Should be trained in surgical interevention, with sound knowledge of Pelvic Anatomy
- DIC is a dreaded complication, usually as a result of or due to precedent cause
- Team effort in an adequate facility center
- Mortality >20% in various study

SATISFACTION GUARANTEED WITH INDIVIDUALIZED Rx


Thank You