

# **Obstetric Haemorrhage: Emergency Cases**

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# Aims

- For non obstetricians to understand what we get up to
- For laboratory staff to appreciate that we are not always totally unreasonable people

# Obstetric Haemorrhage: Emergency Cases

- Causes
- Predisposing Factors
- Presentation
- Management

# Obstetric Haemorrhage: Emergency Cases

- **Causes (the four T's):**
  - Tone, Tissue, Trauma, Thrombin
- **Pre-disposing factors:**
  - having a baby
- **Presentation:**
  - at the most inconvenient time
  - very rapidly
- **Management:**
  - decisively
  - with team work

# Massive Obstetric Haemorrhage

- **> 2000 ml**
- **Rate > 150 ml / minute**
- **>50% blood volume < 3 hours**
- **Haemoglobin drop > 4 g/dl**
- **Acute transfusion > 4 units**

# Case 1: low risk vaginal birth

- Age 27, para 0 with uneventful pregnancy
- Spontaneous onset of labour at term
- Secondary arrest at 8cm dilatation (deflexed OP): syntocinon augmentation
- Vaginal delivery with episiotomy after 2 hour second stage: 4.5 kg in good condition
- Brisk bleed after delivery of the placenta
- Estimated blood loss 2400 mL

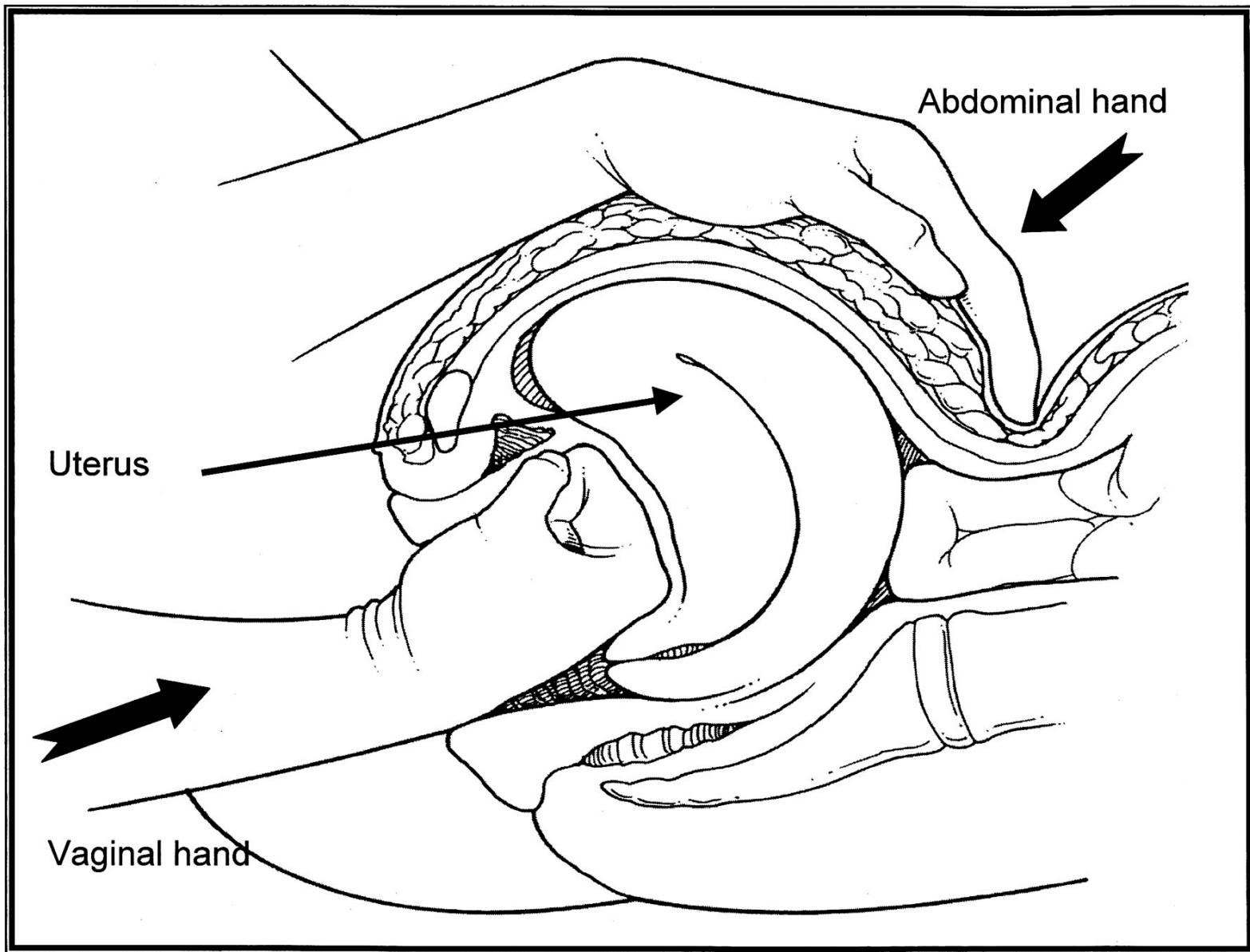
# Case 1 treatment

- IV access and crystalloid
- Bi-manual compression
- Syntocinon 10 IU stat and infusion 10 IU / hour
- EUA: clot and cotyledon removal, check cervix and vagina, suture episiotomy and extension
- Insert Bakri uterine balloon, inflate to 400mls
- Carboprost 250 g MI every 15 mins x2
- Remove Balloon next morning
- Iron infusion

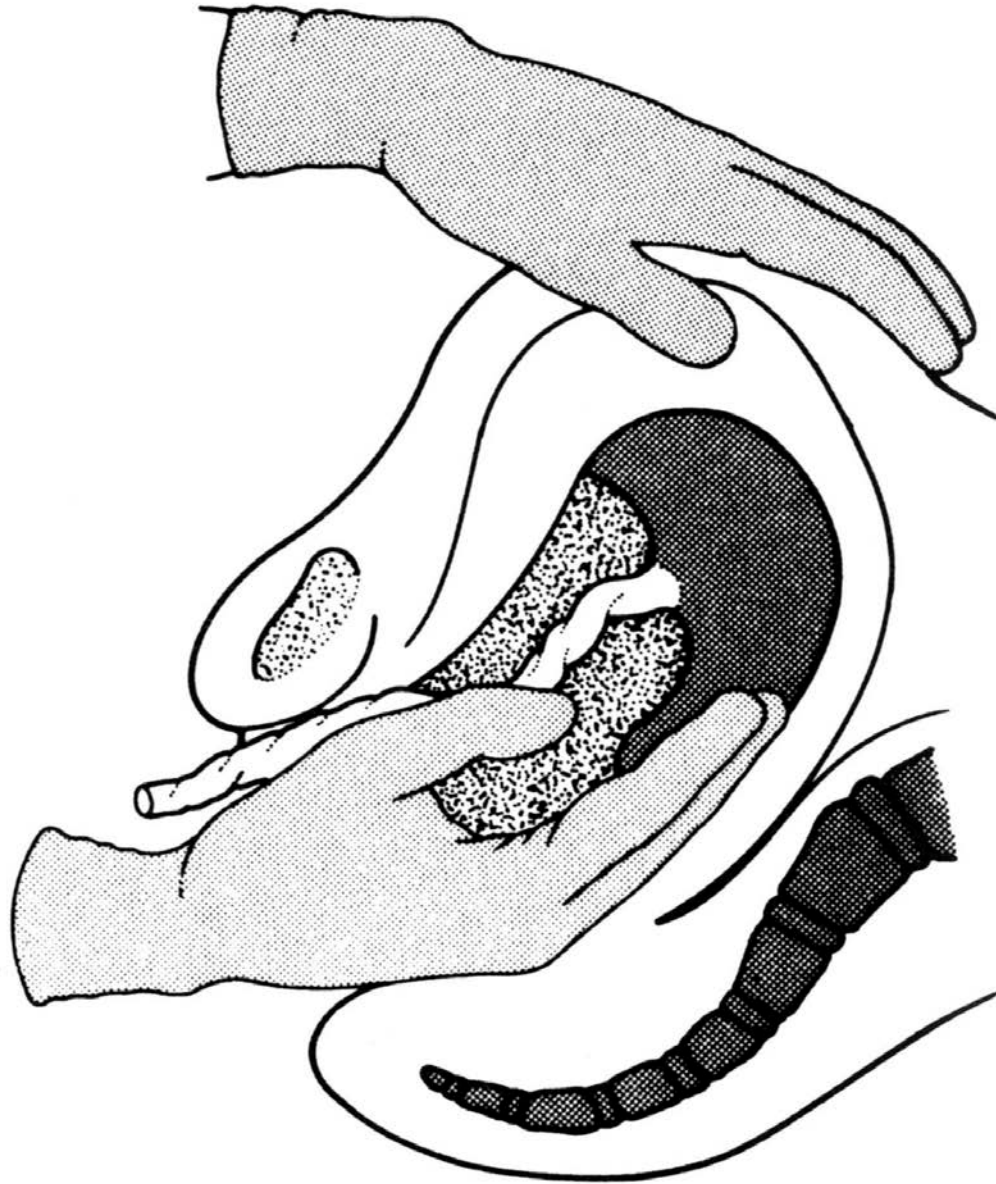
# Case 1

- **Diagnosis:**
  - atony
  - partially retained placenta
- **Predisposing factors:**
  - long labour
  - malposition
  - large infant
  - episiotomy





**Fig 3 Bimanual internal compression of the uterus**

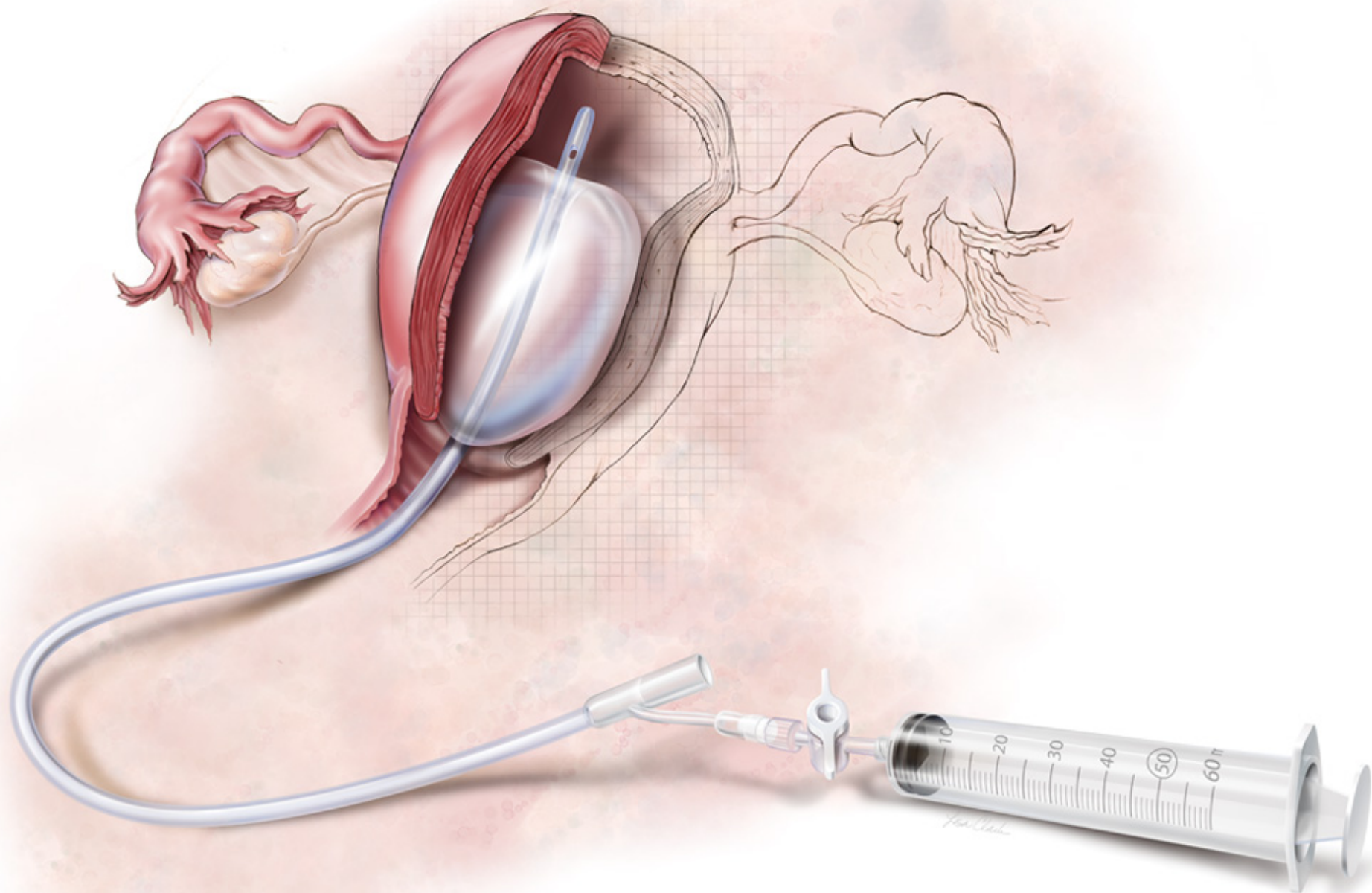


COOK®

MEDICAL

# Bakri

POSTPARTUM BALLOON



# **Case 2: Multigravid labour leading to Caesarean Section**

- **Age 29, BMI 38, five vaginal deliveries at term**
- **Spontaneous labour at 41 weeks**
- **Secondary arrest of labour at 9cm dilatation with 'brow' presentation**
- **Caesarean section**
- **Atony: estimated blood loss 2500 ml**
- **Re-infuse 702 ml salvaged blood (Hb 9.8 day 2)**

# Case 2 treatment

- Resuscitation
- Uterine compression and uterotonics
- B-lynch suture

# One hand life saver

## Manual Compression at the bifurcation of the Aorta:

- Restores diastolic pressure and slows heart rate to allow improved coronary perfusion and decreased cardiac oxygen consumption
- “Buys time” until blood and help can come



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# B-Lynch Suture

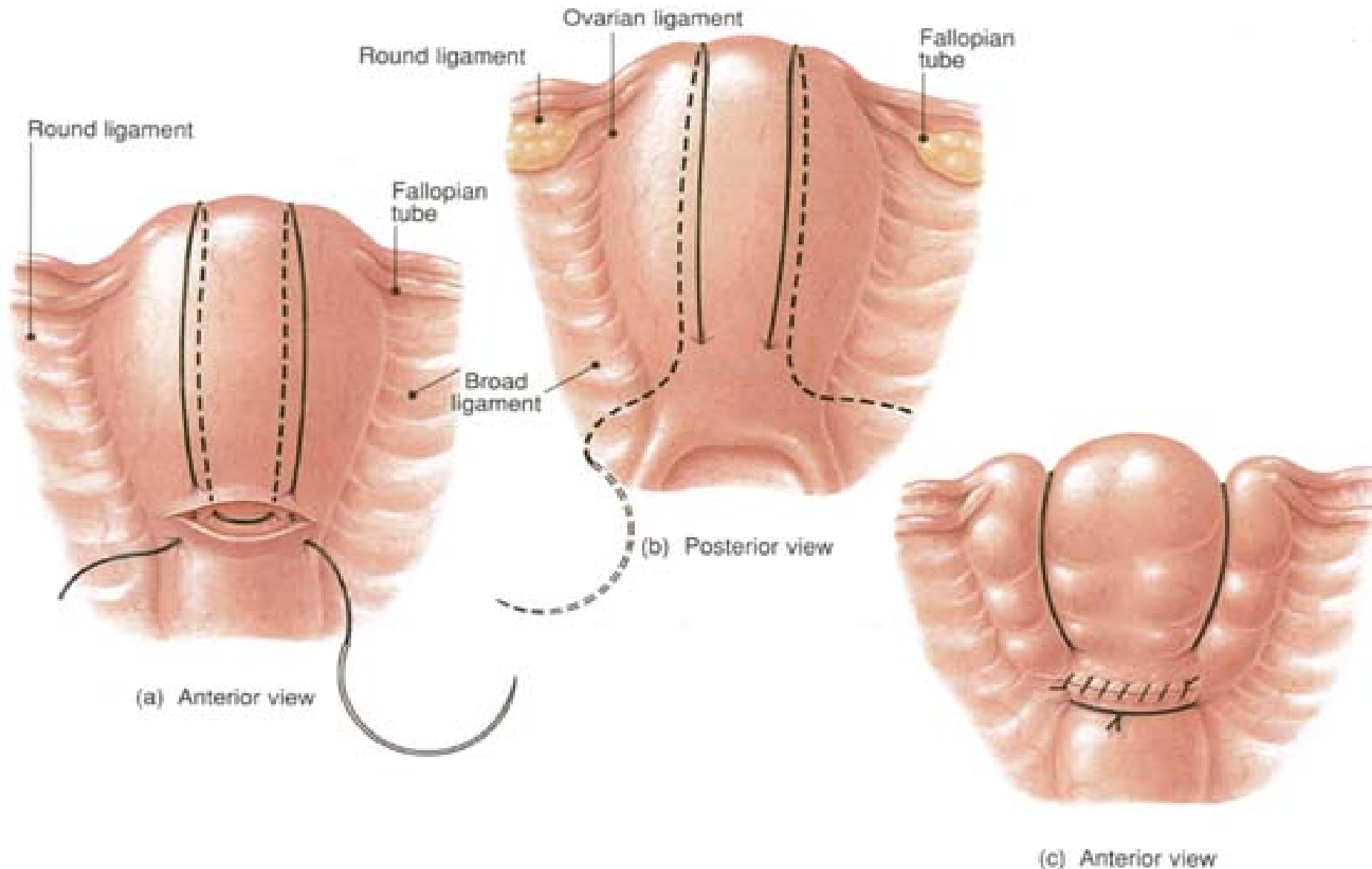
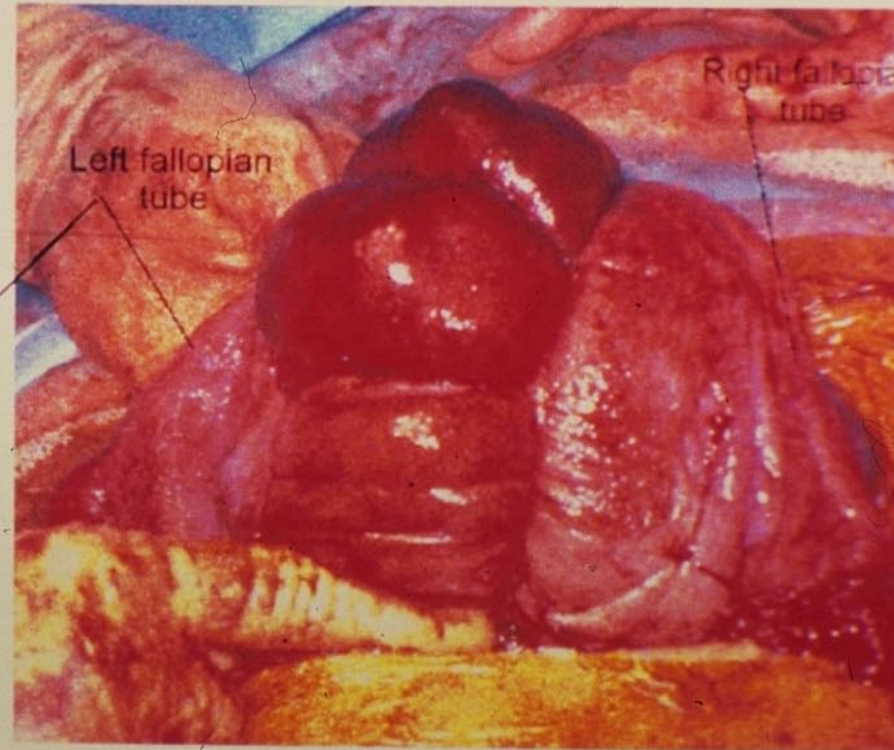
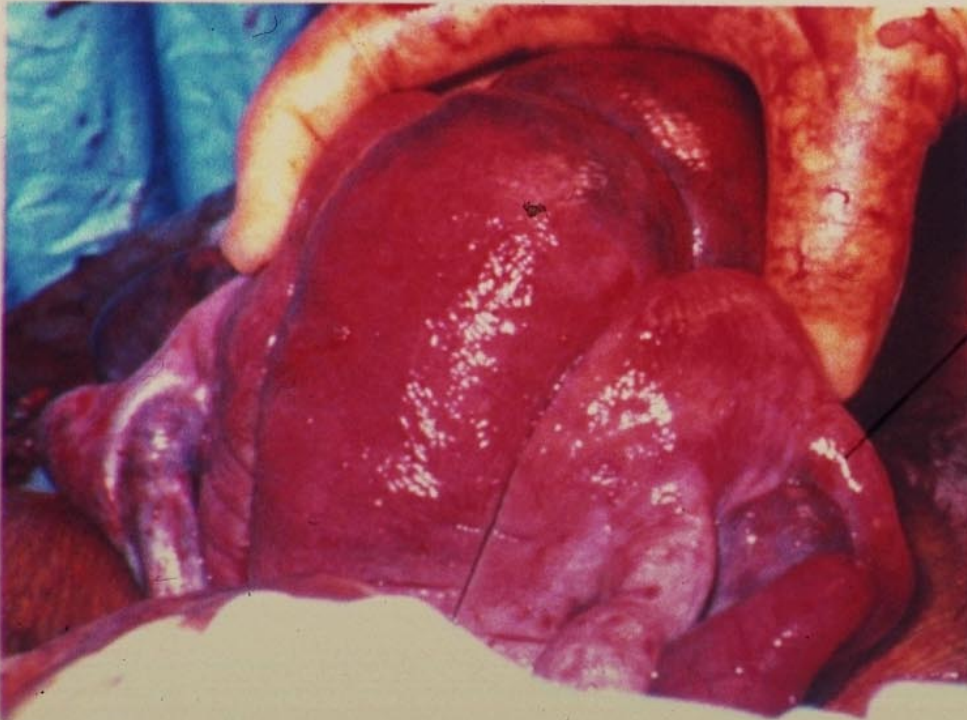




Figure 3

Anterior view

Posterior view



# Case 2

- **Diagnosis:**

**Atony and extension tear of lower segment  
uterine incision**

- **Predisposing factors:**

- **‘Grand’ multiparity**
- **Obesity**
- **Obstructed labour with mal presentation**
- **Caesarean section**

# **Case 3: Emergency Caesarean section for major placenta praevia**

- **Age 31      Para 1 (vaginal delivery at term)**
- **Planned Caesarean Section at 39 weeks**
- **Present in labour at 37 weeks**
- **Persistent bleeding from posterior placental bed after routine separation (not accreta)**
- **Estimated blood loss 1800 ml**
- **Re-infuse 635 ml salvaged blood**
- **Hb 10.1 on day 1**

# Case 3 treatment

- Uterine compression and uterotonics
- Oversee placental bed
- Full thickness uterine sutures
- Insert Uterine Bakri balloon abdominally, close lower segment and inflate per vagina before closing abdomen

# Case 3

- **Diagnosis:**  
**bleeding from abnormally sited  
placental bed**
- **Predisposing factors:**
  - Placenta praevia
  - Caesarean section

# **Case 4: Vaginal trauma after forceps delivery**

- **Age 27, para 0**
- **Uneventful pregnancy and spontaneous labour at term**
- **Fetal bradycardia at full dilatation**
- **Easy forceps delivery (deflexed OA at S+1)**
- **Modest extension of episiotomy and left posterolateral vaginal wall tear**

# Case 4 treatment

- Pack vagina with gauze roll
- EUA, suture+++++ episiotomy and tears
- On going bleed despite pressure and re-packing
- 2<sup>nd</sup> consultant at 2am: further suturing
- Intervention radiology: on going bleeding
- Vaginal gauze pack and Bakri balloon in rectum
- ITU
- 27 units red cells, 11 FFP, 2 cryoprecipitate, 2 platelets

# Case 4

- **Diagnosis:**
  - lower genital tract trauma
  - Coagulation defect
- **Predisposing factors:**
  - Instrumental delivery
  - Prolonged blood loss



# Case 5: Placental abruption

- Age 24, para 0
- Acute onset at 22 weeks of lower abdominal pain and light vaginal bleeding
- Tense uterus, dead fetus
- Bruising from blood pressure cuff and oozing from IV cannula
- INR >9, APTT >7

# Case 5 treatment

- Induction of labour
- Uterotonics
- Prolonged aggressive correction of coagulopathy
- (hysterotomy)

# Case 5

- **Diagnosis:**  
**Placental abruption**
- **No predisposing factors**

# Uterotonics

- **Oxytocin (syntocinon)**
- **Ergometrine**
- **Carboprost**
- **Misoprostol**

# Other surgical options

- Stepwise uterine de-vascularisation
- Internal iliac artery ligation
- Hysterectomy:
  - Don't wait until patient is in extremis
  - Involve 2<sup>nd</sup> consultant
  - Inform partner before proceeding (but no relevance to consent)
  - leave cervix?

# Practicalities

- Use trigger: 'Massive Obstetric Haemorrhage'
- Clearly defined roles within team
- Major Obstetric haemorrhage 'Pack'
  - 6 units packed cells
  - 4 units FFP
  - 1 unit platelets
- Documentation

Patient Label

Royal Cornwall Hospital NHS Trust  
Directorate of Obstetrics & Gynaecology  
**Post partum Haemorrhage (PPH) Summary Proforma**

<b>Date and time of PPH</b>		
<b>Location of delivery</b>	RCHT / Penrice / Helston / Home/ St Mary's	
<b>Mode of delivery</b>	NVD / Kiwi Ventouse / Forceps / LSCS / Vaginal Breech	
<b>Date and Time of delivery</b>		
<b>Total blood loss</b>		
<b>Time transfer to RCHT (if community site)</b>		
<b>Primary source of bleeding -</b>	Uterine atony / retained placenta / genital tract trauma / Other (please state.....)	
<b>Secondary source of bleeding -</b>	Uterine atony / retained placenta / genital tract trauma / Other (please state.....)	
<b>Communication</b>	<b>Name</b>	<b>Time called /Time arrived</b>
Delivery suite coordinator :		/
Obstetric Registrar :		/
Obstetric SHO :		/
Resident Anaesthetist:		/
Consultant Obstetrician:		/
Senior Anaesthetist:		/
ODP:		/
Blood bank informed:		/
MSW/Porter on standby for urgent samples/blood collection:		/
<b>'Massive obstetric haemorrhage' trigger phrase.</b>		<b>Time:</b>
Obstetric haemostatic pack Requested by		/
Interventional radiologist:		/

Other personnel please specify:	/
<b>Management</b>	<b>Time commenced</b>
Facial oxygen	
MEOWS chart/observations	
Intravenous access – 2 large bore cannulae	
FBC , clotting, G&S or cross match & sent	
Fundal massage	
Urethral catheter	
Drugs	
Bimanual compression	
In to theatre (management to continue on green op sheet)	

Use MEOWS chart for observations and, fluid input and output

**Summary of fluid replacement**

Product	Total Volume Given
Normal Saline	
Hartmann's	
Gelofusine	
Blood – cross-matched	
Blood – O Rh - ve	
Other i.e. Fresh Frozen Plasma(FFP) /Cryo/ Platelets	

**Summary Uterotonics used**

Product	Dose and Route of administration	Number of times given
Syntrometrine		
Syntocinon/ergometrine bolus		
Syntocinon infusion		
Haemabate		
Misoprostal		

**Serial Haemoglobin (Hb) & Clotting Results**

Date / Time						
Signature						
Hb						
WBC						
Platelets						
Hct						
INR						
APPT						
Fibrinogen						

Name.....

Signature..... Date.....



# PPH Management

