The O & G HO Guide

Labour, Obstetrics with Gynae-Onco Related Short Notes

Compiled by Gerard Loh
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Dr Wong JC, Dr Yusnira, Dr Rosvin, Dr Suri, Dr Komal, Dr Mimi, Dr Che Hasnura,
Dr Mashar, Dr Sharmina, Dr Bahijah, Dr Fauziah, Dr Saleha

and to fellow colleagues, Sisters, SN and JM who taught me so much!

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Plates of duty
Labour Delivery Suite + HDU
Patient Assessment Centre
Wards – Antenatal, Postnatal, Gynae-Onco, NICU/Paeds
OT ELLSCS Mon-Fri, Gynae – Tues, Thurs
Clinic

<table>
<thead>
<tr>
<th>Shift system</th>
<th>AM</th>
<th>PM</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDS</td>
<td>7am-6pm weekdays 7am-2pm Saturday</td>
<td>11am-1pm weekday 10am-11pm weekend</td>
<td>10pm-10am</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>* 2 HOs to clinic next morning on Mon/Wed/Fri</td>
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<tr>
<td>PAC</td>
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<tr>
<td>4D Antenatal ward</td>
<td>7am-6pm weekday 7am-11am weekend</td>
<td>11am-11pm weekday 10am-11pm weekend</td>
<td>10pm-10am</td>
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<tr>
<td>4C Postnatal ward</td>
<td>(Grp in charge of ward)</td>
<td>(4D+4C)</td>
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</tr>
<tr>
<td>6A Gynae-Onco ward</td>
<td>7am-2pm Saturday</td>
<td>(6A)</td>
<td></td>
</tr>
<tr>
<td>Wards 4D / 6A</td>
<td>1 Group will be in charge of wards every 2 weeks</td>
<td>* 10am-2pm (review mothers in 4A+NICU)</td>
<td>*both ward HOs to 4C next morning 7am-10am</td>
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<tr>
<td></td>
<td>* 2 HOs goes to clinic</td>
<td>2pm-11pm (ward)</td>
<td>* ward HOs must do night review for 4C</td>
</tr>
</tbody>
</table>

* tends to change from time to time

This compilation of short notes is intended only as a quick reference guide.
Always refer to your hospital’s own protocol for the full plan and management i.e HA O&G protocol

May this guide assist you in your O& G Posting! Special thanks to Dr Liew for assisting me in this project. Your kindness will be remembered by us all.

Gerard Loh Chien Siong
M.D., CSMU, Ukraine
O&G Posting March-June 2012

More: HOW O&G guide part 1 available on www.myhow.wordpress.com
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>AC-</td>
<td>Abdominal circumference</td>
</tr>
<tr>
<td>AFI-</td>
<td>Amniotic fluid index</td>
</tr>
<tr>
<td>AFP-</td>
<td>Alpha fetoprotein</td>
</tr>
<tr>
<td>ACL-</td>
<td>Anticardiolipin antibody</td>
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<tr>
<td>AID-</td>
<td>Artificial insemination of husband's sperm</td>
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<tr>
<td>AID-</td>
<td>Artificial insemination of donor's sperm</td>
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<tr>
<td>ANC-</td>
<td>Antenatal clinic</td>
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<tr>
<td>AFI-</td>
<td>Amniotic fluid index</td>
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<tr>
<td>APS-</td>
<td>Antiphospholipid syndrome</td>
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<tr>
<td>ARM-</td>
<td>Artifical rupture of membrane</td>
</tr>
<tr>
<td>A&amp;W-</td>
<td>Alive n well</td>
</tr>
<tr>
<td>ACH-</td>
<td>After coming head</td>
</tr>
<tr>
<td>BBA-</td>
<td>Born before arrival</td>
</tr>
<tr>
<td>BOH-</td>
<td>Bad obs history</td>
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<tr>
<td>BPD-</td>
<td>Biparietal diameter</td>
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<tr>
<td>BPP-</td>
<td>Biophysical profile</td>
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<tr>
<td>BSO-</td>
<td>Bilateral salphingoophorectomy</td>
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<tr>
<td>BTL-</td>
<td>Bilateral tubal ligation</td>
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<tr>
<td>BSP-</td>
<td>Blood sugar profile</td>
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<tr>
<td>CCT-</td>
<td>Controlled cord traction</td>
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<td>CIN-</td>
<td>Cervical intraepithelial neoplasia</td>
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<td>COCP-</td>
<td>Combined oral contraceptive pills</td>
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<tr>
<td>CRL-</td>
<td>Crown rump length</td>
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<td>CTG-</td>
<td>Cardiotocograph</td>
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<tr>
<td>Cx-</td>
<td>Cervix</td>
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<td>Cord round neck</td>
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<td>Discuss with</td>
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<td>Dysfunctional uterine bleeding</td>
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<td>Estimated fetus weight</td>
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<td>Elective lower segment C-section</td>
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<td>Emergency lower segment C-section</td>
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<td>E2-</td>
<td>Estradiol</td>
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<td>EUA-</td>
<td>Examination under anaesthesia</td>
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<td>FL-</td>
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<td>FSB-</td>
<td>Fresh still birth</td>
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<td>FH-</td>
<td>Fetal heart</td>
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<td>Gonadotropin releasing hormone</td>
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<td>HC-</td>
<td>Head circumference</td>
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<td>hCG-</td>
<td>Human chorionic gonadotropin</td>
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<td>Hormone replacement therapy</td>
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<td>HbA1c-</td>
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<td>High vaginal swab</td>
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<td>High grade squamous intraepithelial lesion</td>
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<td>Impaired glucose tolerance</td>
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<td>Intrauterine gestational sac</td>
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<td>Intrauterine growth restriction</td>
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<td>I&amp;D-</td>
<td>Incision and drainage</td>
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<td>Lupus anticoagulant</td>
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<td>LSCS-</td>
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</table>
86. Lap & Dye- laparascopy and dye insufflation
87. LAVH- Laparoscopic assisted vaginal hysterectomy
88. LMSL- light meconium stained liquor
89. LNMP- last normal menstrual period
90. LPC- labour progress chart
91. LOA- left occipito anterior
92. LOP- left occipito posterior
93. LOT- left occipito transverse
94. LH- luteinizing hormone
95. LBW- low birth weight
96. LGSIL- low grade squamous intraepithelial lesion
97. MA- membrane absent
98. MOGTT- modified oral glucose tolerance test
99. MI- membrane intact
100. MMML- moderately meconium stained liquor
101. MOD- mode of delivery
102. MMG- mammogram
103. MRP- manual removal of placenta
104. MSB- macerated stillbirth
105. OCP- oral contraceptive pills
106. OA- occipito anterior
107. OP- occipito posterior
108. OT- occipito transverse
109. OI- ovulation induction
110. o/e- on examination
111. PA- placenta abruptio
112. PCOS- polycystic ovarian syndrome
113. PE- pre-eclampsia/ pulmonary embolism
114. PE chart- pre-eclampsia chart
115. PFR- pelvic floor repair
116. PID- pelvic inflammatory disease
117. PIH- pregnancy induced hypertension
118. PNC- postnatal clinic
119. POA- period of amenorrhea
120. POC- product of conception
121. POD- pouch of Douglas
122. PMB- postmenopausal bleeding
123. POG- period of gestation
124. POP- progesterone only pills
125. PP- placenta previa
126. PPH- postpartum hemorrhage
127. PROM- premature/prelabour rupture of membrane
128. PPROM- preterm premature/prelabour rupture of membrane
129. PV- per vaginal
130. P/A- per abdomen
131. P- para
132. REDD- revised expected date of delivery
133. ROA- right occipito anterior
134. ROP- right occipito posterior
135. ROT- right occipito transverse
136. Re- review
137. RPC- retro-placental clot
138. S&C- suction and curettage
139. SE- speculum examination
140. SFH- symphysiofundal height
141. SGA- small for gestational age
142. SPA- suprapubic angle
143. SROM- spontaneous rupture of membrane
144. St- station
145. SVD- spontaneous vertex delivery
146. SOD- sure of date
147. s/b- seen by
148. STO- suture to open
149. SCC- squamous cell carcinoma
150. STD- sexually transmitted disease
151. STI- sexually transmitted infection
152. Synto- syntocinon
153. TAHBSO- total abdominal hysterectomy with bilateral salpingo-oophorectomy
154. TAS- transabdominal scan
155. TCA- to come again
156. TLH- total laparoscopic hysterectomy
157. TOS- trial of scar
158. TOP- termination of pregnancy
159. TVS- transvaginal scan
160. TMSL- thick meconium stained liquor
161. UV prolapsed- uterovaginal prolapse
162. Ut- uterus (Ut-TS: uterus at term size)
163. UPT- urine pregnancy test
164. USOD- unsure of date
165. VBAC- vaginal birth after Caesarean
166. VE- vaginal examination
167. V/v- vulva/vagina
168. Vx- vertex
PAC (Patient Assessment Centre)
s/b or d/w ___ (Medical officer/specialist)

Obstetrics Clerkings

Age/Race:

Gravidity, parity (G1P0) @ Gestation age: @ weeks + days by POA/POG/REDD

Dates: SOD/USOD, Menses: previously regular/irregular menses,

Contraception: IUCD/barrier/OCP?

Scans: Earliest scan @ __ weeks, subsequent scans corresponds to date

Verification of dates

The most accurate parameter for dating is the CRL. If this is unavailable the earliest scan is used. The LMP is used to calculate POA

Allowed discrepancy= 1st Trimester ~1 week (4/7), 2nd Trimester ~2 weeks (9/7), 3rd Trimester ~3 weeks

* if USOD: early scan @ ~ 10 weeks, if >1 weeks discrepancy, REDD shld be given

if REDD was given earlier, use it to calculate POG

Marital status: SMS/2nd union

Conception: spontaneous/ artificial/subfertility

ANC: (PIH/PE/GDM/ANEMIA/UTI/UTRI/Candidiosis / history of abortion..etc) or uneventful

c/o or referred from KK/GP for….

Otherwise

no show,
no LL,
no UTI,
no fever,
no contraction pain

good FM

Early pregnancy problem: (check antenatal book – pink book)

-booking date @ weeks, @ KKIA ____

-booking BP __, remains normotensive throughout pregnancy ranging ___

-Booking Hb __, anemic? Latest Hb __

-MGTT done? (indication: family hx, age >35, excessive weight gain, prev macrosomia/GDM/fetal abnormalities)

-Albuminuria/glycosuria?

-Blood Group / Rhesus (if NEGATIVE, any Rhogum given, @ __ weeks

-Infections screening done? (VDRL/HIV screening) Not reactive

Past Obstetric hx:

year, mode of delivery, hospital, baby sex, weight , any complications?

* if spacing >5 years- why? Voluntary? Diff union?

* Pay attention to prev scar, indication of LSCS, counselling for VBAC

*post partum: fever/prolonged stay in ward/ wound breakdown/PPH/blood transfusion?

Medical/surgical history

- known medical illness or surgeries (asthma, thyroidism, DM, HPT etc)

Social Hx: marital status (married/SMS/2nd union), occupation, husband’s occupation, smoker/alcohol, type of house/rented/own resident

Clinical Assessment

General: alert, conscious, not pale, non tachyphoic, hydration fair

Systemic: lungs clear, CVS DRNM, Thyroid NAD (goiter), Breasts NAD (cyst/engorged/mass)

Pat: soft, non-tender, singleton, uterus @ wks, cephalic ?/5, EFW, scars?

Speculum: (if indicated: LL, PV bleed/prem cx)

Cervix healthy (ectropion/fibroid), cough test +/- Litmus test, pooling of liquor, os closed,

* any discharge (white curdy/pus)- take High Vaginal Swab (Mandatory if pt is subjected to speculum)

Ves: VV normal (varicosity, vesicles, cysts, etc), Os dilation, Cervix effacement, Station, Vertex, membrane intact/absent, no cord/placenta

ultrasound: Presentation, Lie, Placenta Site, AFI, EFW, CGA, parameters – BPD, FL, AC, HC

CTG: Define risks, Contractions, Baseline Fetal Heart Rate, Variability, Acceleration, Deceleration (refer to CTG section)

Impression: summary of problem (25 yo malay lady, G1P0 @ 38 weeks, Imp: active phase of labour)

Management:
<table>
<thead>
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<th>Common problems, assessment and management</th>
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<tbody>
<tr>
<td><strong>C/O</strong></td>
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</table>
| Lower abd pain | 1) PA  
- intensity  
- frequency  
- a/w show/LL? 2) VE  
3) CTG  
* Primid Os closed/TOF/<3cm = allow home if nearby+ transport available  
* >3cm = for admission  
Ddx = stones, appendicitis, AGE |
| Leaking liquor | 1) PA  
- since @ time  
- hx/clinic suggestive?  
- character, density (Clear?)  
- gushing/dribbling/urine  
- soak pants/spots  
- used pads? 2) Speculum + HVS  
3) VE  
4) CTG  
5) Scan – AFI  
* if hx and clinically demonstrable⇒PPROM/PROM?  
* if not Hx suggestive, clinically not demonstrable, admit for pad chart]  
Start antixb after 18hrs, if not delivered, KIV IOL if >24hrs  
* w/o for signs of chorioamnionitis – fetal and maternal tachycardia, fever, meconium, WCC elevated |
| Show | 1)PA  
- @ time  
- mucous+blood a/w abd pain?  
- a/w leaking liquor?  
- pad soaked/spotty 2) speculum/VE  
3)CTG  
* Primid Os closed/TOF/<3cm = allow home if nearby+ transport available  
* >3cm = for delivery  
Ddx = PV bleeding |
| PV bleed | 1) PA  
- @ time, a/w pain?  
- spotty/stain/soaked?  
- trauma? Any POC  
- scans/placenta 2) Speculum  
3) CTG (>34/52)  
* >22weeks TRO Placenta praevia / acreta (detailed scan)  
* <22weeks TRO miscarriage  
* if indeterminate APH, do not allow post dates  
Ddx = cervical ectopion |
| Discharge | 1) PA  
- colour, smell  
- amount, using pad?  
- dysuria, itchy, fever?  
- ? LL  
2) speculum + HVS  
3) UFEME  
Curdy white = vaginal candidiasis. Treat with canestan pessary I/I ON |
| UTI symptoms | 1) UFEME (Leu/nitrate +)  
2) Urine C & S  
Start antibiotics (T. Cephalexin 500mg TDS 1/52)  
ural I/I sachet tds 3/7 |
| Reduced FM | 1) PA  
- correct FKC? 9am-9pm  
- usual time of completion  
- ANC prob? h/o trauma?  
- h/o UTI/candida? 2) scan FH/FM  
3) CTG (>34/52)  
Observe 1 day FKC in ward (case to case basis)  
Teach correct method of recording FKC  
if persistently reduced and at term, consider IOL |
| High BP | 1° episode @ wk  
- on Rx?  
- h/o hypertn prev pregnancy  
- signs of IE  
Blurring of vision, headache, giddiness, epigastric pain, reflexes brisk, clonus |
| GDM | 1) PA  
- dx @ wks  
- diet control/insulin  
- latest MGT/BSP  
- EFW, last scan 2) scan FH/FM  
3) CTG (>34/52)  
MGTT/BSP | Scan plot growth chart  
HB A1C(?Preexisting DM)  
If poor diet control, 7 point BSP KIV insulin if deranged  
Do not allow post date  
detailed scan for fetal abnormalities/macrosomia  
opthalmal appointment  
reifer dietician |
| Prem contraction | 1° wks  
- frequency  
- h/o UTI/candida?  
- dexe given? 2) Time contraction  
CTG  
< 34weeks, consider tocolysis  
34-37weeks, allow labour if progress (d/w MO)  
IM Dexamethasone 12mg x 2 doses 12 hrs apart  
T. EES 400mg tds for 5/7 |
| Anemia | 1) anemic signs  
- Hb @ wks, latest  
- on hematicins/obimin  
- hx transfusion?  
2) FBC (Hb/MCH/MCV)  
3) Anemic profile (Fe)  
4) scan  
5) * FBP/Hb Analysis  
* Scan for fetal abnormalities  
Determine type of anemia (IDA, B12/Folate defl/thalasemia etc) |
| Rhesus Negative | 1) GSH  
- Gravidity/parity  
- husband/prev baby Rh  
2) Coombs test  
* Rhogam at 28wks and 34weeks, and within 72hrs post partum |
| Thyroidism | 1) thyroidism signs  
- dx @ wks  
- hypo/hyperthyroidism  
- on medication? 2) TFT  
Hypo = L-Thyroxine  
Hyper – PTU  
Carbimazole after d/w endocrinologist(under combine clinic every last Thursday of the month) |
STICKERS
Under the WHITE code: (case suitable for home delivery - provided trained birth attendant is present)

1. Gravida 2-5
2. No previous obstetric problems
3. No medical conditions like anemia, hypertension, Diabetes, heart diseases, Tuberculosis, Asthma.
4. No complications in the present pregnancy
5. Cephalic presentation

Under the GREEN code: (Refer cases to public health nurses)

1. Maternal age: Primigravida: <> 35 years old and Multipara: 40 years old and above
2. Gravida 6 and above
3. Birth interval of less than 2 years or above 7 years
4. Mothers with special problems, e.g. psychiatric, handicapped, single parent
5. Height <>
6. Unsure of dates

Under the RED code: (Immediate hospital admission)

1. Severe pre-eclampsia
2. Eclampsia
3. Antepartum haemorrhage
4. preterm labour <>
5. Meconium stained liquor
6. Cord prolapse
7. Retained placenta

Under the YELLOW code: (Refer to doctor at healthcare centre or hospital)

1. Rhesus negative
2. Hb <>
3. Dyspnea on exertion
4. Urine albumin 1+
5. Multiple pregnancy
6. Decreased fetal movement
7. Obesity >80kg
8. Drug addiction
**Management of common problems**

**In Active Phase Of Labor**

**Transfer to LDS**
- plot partogram
  - VE on strong contraction / bearing down
  - Time contraction in 2hrs, if suboptimal for augmentation as per protocol
  - IVD 4pints HM/24hrs
- Con’t central CTG monitoring with 2hrly intermittent tracing
- Offer entonox
- IM pethidine 75mg + IM phenergan 25mg if CTG reactive

**Latent phase of labour**
- admit ward 4D
- CTG daily
- FKC
- LPC / FHR 4hrly
- VE on Strong contraction / bearing down / or LL
- FBC, GSH

**PROM / Leaking Liquor**
- admit ward 4D
  - FBC / GSH / HVS
  - LPC / FHR 4hrly
  - strict FKC
  - CTG daily
  - strict pad chart - to inform if greenish discharge
  - watchout for s/s of chorioamnionitis
- start IV ampicillin 2g stat, if not delivered after 18hr @ __H, then 1g QID
- KIV IOL if not delivered after 24hr
  * if allergic to penicillin - clindamycin

**Reduced FM**
- admit ward 4D
- FBC / GSH
- LPC / FHR 4hrly
- strict FKC
- CTG daily
- if persistently reduced FM, KIV IOL

**Premature contraction for tocolysis**
- admit HDW
- FBC / GSH / HVS / UFEME
- LPC / FHR 4hrly
- strict FKC
- T. adalat 20mg in 4 doses every 15mins
- IM dexa 12mg stat then 12hr later
- book ventilator

**False labour**
- Allow home with reassurance
- TCA stat if abdominal pain/LL/PV bleed / foul smelling discharge
- TCA at EDD +9/7 for IOL if not yet delivered
  * GDM/PIH/PE/Indeterminate APH cannot allow post dates

**Vaginal Candidiosis**
- Allow discharge with medication
- Canesten pessary 500mg ON 1/7
- TCA 2/52 clinic to review HVS
- TCA stat if abdominal pain/fever / foul smelling discharge / PB bleed

**UTI**
- Allow discharge with medication
- HVS / UFEME / Urine C&S taken to trace
- T. Cephalexin 500mg tds x 1/52
- Sachet Ural 1/1 TDS x3
Gynae Clerking (pregnancy <22 weeks + gynae problems)

Age/sex/race
K/c/o
LCB (last childbirth) \___ years
LMP/Menopause (how many years)
c/o: ___

**PV bleed**
- pregnant? UPT done self/GP +?
- onset time, history, contraceptives?
- LMP, heavy? > flow than usual menses?
- heavy physical activity prior to onset?
- How many pads used?
- recent SI?
- a/w abd pain?
- passed out any POC?
- Clots or fresh blood

Vital signs w/o hypovolemic shock
FBC/GSH
Sexually active \ UPT/ Beta HCG
Per Speculum
U/S TRO ectopic/miscarriage/fibroids/tumour
PAP smear TRO Ca
VE: Os open/closed

Miscarriage- observe, D&C/ERPOC
eptic - diagnostic lap
Ectropion/Polyps/ molar pregnancy
Fibroids – surgery/hormonal
Endometriosis –review PAP smear
Cervix Ca - onco clinic
Menorrhagia/dysmenorrhea- hormone, clinic

Threatened miscarriage – TCA 2/52 for U/S or TCA stat if POC passed out, bring POC

**Abdominal Pain/discomfort**
- pregnant? UPT done self/GP +?
- onset time, history, contraceptives?
- location of pain, radiating? contraction?
- anemic sx? Fainting? giddiness?
- a/w PV bleed?
- a/w dysuria? PV discharge?
- abdominal distension? Mass?

Vital signs w/o hypovolemic shock
FBC/GSH
Sexually active \ UPT/beta HCG
PA: mass? Guarding?
U/S ectopic: free fluid POD, empty Ut, ET thick
fibroids/ca/cyst = unusual mass
IUD= no FH/FM
UTI= suprapubic pain, itchy, dysuria

Miscarriage/ectopic/molar/IUD
Ovarian cyst/ cancer
Ddx: gastritis, appendicitis, renal colic, cholelithiasis/cystitis/UTI
Admit for surgery

**Oncology cases**
- first presentation, hospital, symptoms
- PAP smear/sampling done?
- early and latest scans – CT TAP/MRI
- surgeries – TAHBSO/TLH/cystectomy etc?
- HPE results
- chemo/radiotherapy done?
- agent, line, cycle ?

CT TAP results
HPE results
Ca markers CA125, CEA etc.
Beta HCG/ AFP - PTB

Surgery/chemo/radiotherapy
Admit for op/TCA onco clinic for counselling
Prechemo/pre op Blood Ix
Digitalize CT scans

**Hyperemesis gravidarum**
- onset, how many times per day
- ate outside? food poisoning?
- fever? Chills? Rigor?
- LOA, poor oral intake
- LOW?
- a/w diarrhoea/ abdominal pain?
- character: food/bile/blood/projectile?

UFEME: Ket +, Nitrite+ 
RP: dehydrated picture
Loss of weight
DDx: nausea and vomiting in pregnancy, AGE, food poisoning, gastritis/GERD

IVD 6 pints HM
Daily urine ketone
Vomit chart, I/O chart
IV Maxolon 10mg tds
IV ranitidine 50mg tds
Hyperemesis advice

**GDM (<25 weeks)**
sx same as obs
HbA1C – to determine new or preexisting
MGTT

**Miscarriage**
1) Incomplete miscarriage
- evidence of retained POC
- heterogenous echogenicity in uterus
Plan: ERPOC

2) Threatened miscarriage
- viable fetus, FH activity present
- measure CRL for dating

3) Missed miscarriage
- collapsed empty IUGS
TAS >25mm / TVS >20mm

4) Molar pregnancy
- no fetal pole - only vesicles
- snowstorm appearance
- Beta HCG

5) TRO ectopic pregnancy
- empty uterus
- presence of adnexal mass with free fluid
- take beta HCG

---

**HCG LEVELS IN NORMAL PREGNANCY**

<table>
<thead>
<tr>
<th>Weeks Of Pregnancy</th>
<th>HCG level miu/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-50 (Average=14)</td>
</tr>
<tr>
<td>2</td>
<td>5-50 (Average=21)</td>
</tr>
<tr>
<td>3</td>
<td>5-50 (Average=42)</td>
</tr>
<tr>
<td>4</td>
<td>10-425</td>
</tr>
<tr>
<td>5</td>
<td>19-734</td>
</tr>
<tr>
<td>6</td>
<td>1080-3560</td>
</tr>
<tr>
<td>7-8</td>
<td>7650-2900</td>
</tr>
<tr>
<td>9-10</td>
<td>25700-280000</td>
</tr>
<tr>
<td>13-16</td>
<td>13300-254000</td>
</tr>
<tr>
<td>17-24</td>
<td>4060-165400</td>
</tr>
<tr>
<td>24-40</td>
<td>3540-11700</td>
</tr>
</tbody>
</table>
Per abdomen examination
1. soft non tender
2. Uterus @ ___ weeks (SFH)

3) singleton, cephalic /5 (how many fingers in relation to symphysis pubis) 4-5/5 = ballotable/not engaged, <3/5 = engaged

4) Estimated fetal weight (by experience)
**Vaginal Examination**

1. **Vulva-vagina** (check for abnormalities - varicosity, vesicles etc)
2. **Os** (determine this by measuring one’s fingers)
3. **Cervix** dilation, consistency, , thickness, length, position (anterior, axial, posterior)
   - both lips felt ~8cm , single lip felt ~ 9cm, no lips felt = fully

**Cervical Effacement and Dilatation During Labor**

- 1. Cervix is not effaced or dilated.
- 2. Cervix is fully effaced and dilated to 1 cm.
- 3. Cervix is dilated to 5 cm.
- 4. Cervix is fully dilated to 10 cm.

4. **Station** – largest diameter of presenting part in relation to pelvic ischial spines

5. **Vertex** (head felt)
6. **Membrane** intact/absent- (slippery, balloon-like, bulging)
7. **no cord/placenta** felt (tubal structure, pulsatile, rough, soft)
**Per Speculum Examination**

*Indication: leaking liquor, PV bleeding/discharge, prem*

1. Os open/closed
2. Cervix healthy (ectropion/polyps etc)

3. **Pooling of liquor** → a pool of liquor is demonstrable in the vagina
4. **Cough test** → liquor leaks through cervix when cough
5. **Litmus test** → liquor is more alkaline than urine
6. **Curdy whitish discharge** → vaginal candidiosis

*Always take High Vaginal Swab for C&S*
The Obstetric Ultrasound

**BPD**: Measure outer table of the skull to the inner table.

**HC**: Measure around the outer table of the skull.

**AC**: The abdominal circumference is taken with a transverse image to include the stomach, portal vein and the spine in a true transverse plane.

**FL**: The Femur length should only be measured when the femur is horizontal (beam is perpendicular) and shadows evenly at least from both ends.

**AFI**: Amniotic Fluid index (AFI)

 Measure the deepest vertical pocket (with no foetal content) in each quadrant and add them together.

**Placenta**: Anterior/Posterior/Fundal/Lateral/Low

**Dating**

Mean Sac Diameter measurement is used to determine gestational age before a Crown Rump length can be clearly measured. The average sac diameter is determined by measuring the length, width and height then dividing by 3.

Once a fetal Pole can be visualised the CRL measurement is the most accurate method for dating the pregnancy.
Presentation and position

<table>
<thead>
<tr>
<th>Left occiput transverse</th>
<th>Occiput anterior</th>
<th>Right occiput transverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posterior fontanelle</td>
<td>Occipital bone</td>
<td>Frontal bone</td>
</tr>
<tr>
<td>Sagittal suture</td>
<td>Parietal bone</td>
<td></td>
</tr>
<tr>
<td>Anterior fontanelle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Face presentation

A. Chin anterior

B. Chin posterior

Variations of the breech presentation

Complete breech

Incomplete breech

Frank breech
**Labour Delivery Suite**
Consist of Labour Room + HDW

**New Admissions**
1. Review patient notes and history
2. Assess patient: vitals, PA
3. Perform ARM (if MI) as indicated. Note character of liquor. CBD
4. VE internal examination (Os, Cx thickness, location, Station, presenting part, cord/placenta)
5. start CTG, Plot partogram
6. Write details on the board + enter data into central CTG
7. Note time of next VE review

<table>
<thead>
<tr>
<th>From</th>
<th>Time In</th>
<th>Name / AM</th>
<th>Diagnosis</th>
<th>Os</th>
<th>Next VE</th>
<th>To Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>4D/PAC</td>
<td>0600H</td>
<td>Nguyen AM00252332</td>
<td>G1PO @ 38/52 + 6/7 - PROM (LL &lt;18hrs)</td>
<td>6cm</td>
<td>MI-ARM-CL</td>
<td>1000H</td>
</tr>
</tbody>
</table>

**Tasks**
1. ARM/VE review
2. Delivery/Episiotomy
3. Tear/episiotomy repair
4. Mother Post Natal review
5. Baby Post natal review

**ARM (artificial rupture of membrane)**
1. Make sure scans confirm placenta Upper segment
2. Perform VE, membrane intact (smooth, slippery balloon-like) or absent (rough, hair felt)
3. If MI, determine spot for ARM, a slight bulging, may be elicited by asking patient to cough
4. Position 2 fingers at this spot, insert amniohook between your 2 fingers, with hook facing down
5. Rotate hook upwards, using index finger, push the hook lightly against the membrane and slowly retract to rupture the membrane
6. A gushing of liquor indicates a successful ARM. Drain some liquor to examine its character
   a) Clear Liquor
   b) LMSL – light meconium stained liquor – watery brownish stained
   c) MMSL - moderate MSL = watery with tiny particles visible
   d) Thick meconium – minimal liquor, thick greenish/dark particles

![Ammihoook Image](image)

**Plan:**
1. Plot Partogram
2. VE on strong contraction/leaking liquor/bearing down
3. Offer entonox
4. IM Pethidine 75mg + IM phenergan 25mg if CTG reactive
5. Time contraction, if suboptimal for augmentation as per protocol
6. Continuous central CTG monitoring with 2hrly intermittent tracing
7. IVD 4pints HM over 24 hrs

**Inform MO**
- Suspicious/Pathological CTG (fetal brady, late decel, tachy)
- meconium stained liquor
- polyhydramnios for controlled ARM
- abnormal presentation, premature in labour
- Prolonged 2nd stage : Primid >1 hour, multipara >30-45mins
- Retained placenta

**Inform Peds**
- EMLSCS (reason, gestational age, EFW)
- Thick meconium
- Instrumental deliveries
- SGA/Macrosomic/Fetal abnormalities
- GDM on insulin
Plot Partogram

1) G_P_ @_weeks
2) Pb: ANC:
3) Last Meal@time
4) Height Weight
5) FBC Hb Hct Plt WCC
6) screening Blood Grp Infectious Screening
7) Estimated Fetal weight

VE review
3-6cm: 4hrs
7cm: 3 hrs
8cm: 2hrs
9cm: 1hr
Time contraction, if suboptimal for augmentation as per protocol

Contractions
Mild 30secs
Moderate 30-45secs
Strong: >45secs
Optimal = 3-4 in 10mins
* hyperstimulation >4-6

Augmentation

Post Natal Review
1) PA: Uterus well contracted
2) VE: Examine for any tear/laceration/active bleeding
3) evacuate blood clots
4) Examine sutures, any loose sutures, any gauze/tampon
5) Digital rectal exam: any sutures, anal tone intact
6) Any calf tenderness
7) lungs, CVS, vitals,
CTG
Dr C Bravado

1) Define Risks
2) Contractions (2:10, >5 - hyperstimulation
3) Baseline Rate (110-160bpm)
4) Acceleration

![Acceleration Diagram]

5) Variability

![Variability Diagram]

http://utilis.net/fhm/2459.htm
Decelerations –

1. Early – decel occurs with contractions (vaso-vagal response, fetal head compression)
2. Late – decel occurs after contraction (uteroplacental insufficiency)
3. Variable – u shaped, not related to contraction (cord compression)

a) Early

b) Late

c) Variable

d) Prolonged
Fetal Monitor Patterns

Reassuring Pattern
Baseline fetal heart rate is 120-160, preserved beat-to-beat and long-term variability. Accelerations last for 15 or more seconds above baseline, and peak to 15 or more bpm.

Elevated Heart Rate: Tachycardia
Baseline fetal heart rate is above 160, possible onset of decreased variability. Usually due to fetus lacking nourishing blood supply, or resultant effects of some drugs.

Early Deceleration
The onset and the return of the deceleration coincides with the start and the end of the contraction. Decelerations are associated with fetal movement, stimulation, and uterine contractions.

Late Deceleration with Preserved Variability
Fetal heart rate returns to baseline AFTER the contraction has ended. Late decelerations are associated with uteroplacental insufficiency, or decreased uterine bloodflow.

Fetal Monitor Patterns

Reassuring Pattern
Baseline fetal heart rate is 120-160, preserved beat-to-beat and long-term variability. Accelerations last for 15 or more seconds above baseline, and peak to 15 or more bpm.

Late Deceleration with Variability Loss
Fetal heart rate lags behind contractions, with little or no variability in the line. Persistent late decelerations associated with decreased variability is an ominous pattern.

Variable Decelerations
Variable decelerations are variable in duration, intensity, and timing. Acceleration-deceleration-acceleration is due to compression and decompression of cord.

Severe Variable Decelerations
Severe decelerations have depth below 70 bpm, and a duration longer than 1 minute. Persistent variable decelerations may lead to acrocyanosis and fetal distress.
Episiotomy
1. Wait for crowning of the head, give LA
2. Insert 2 fingers as shown, wait for thinning of the perineum
3. Cut at medio-lateral angle while patient is bearing down
4. Guard with tampon

Episiotomy Repair
1. Locate the apex of tear and begin suturing 1cm above this point
2. Apply continuous suture and end with knot at the fourchette
3. Next, apply interrupted suture in the muscular layer
4. Finally, apply interrupted suture to skin (Inside-out → out-in)
**Retained placenta**  
Failed CCT after > 30 mins, inform MO  
- Intraumbilical IV pitocin 50U may help placenta separation sometimes  
- if all fail, for MRP

**PPH**  
- persistent bleeding occurring post partum EBL > 500 - 1000ml  
Tone – uterus muscle fatigue, over distension  
Tissue – retained placenta  
Trauma – tears, uterine rupture/inversion  
Thrombin – clotting disorder, ITP, HELLP syndrome, DIVC

Mx: massage uterus, if not well contracted, IV Pitocin 10U, check for any retained clots or placenta tissue  
check BP if hypotensive, tachycardia, not responsive, pale,  
- Set another IV line, Fluid resus, find source of bleeding, repeat FBC  
- Observe in LDS for 1 hr, BP 1/4hrly until stable, strict pad chart to inform if PV bleed  
- if tachycardia, BP persistently low, fever, admit HDW, KIV blood tx or inotropes

**Cord prolapse** = cord is felt, pulsatile  
Cord presentation = cord felt, but membrane intact

1) determine gestation and viability ( <22 weeks or fetal abnormalities)  
2) If viable, call for help (cord prolapse is NOT a red alert)  
3) Keep finger in vagina, push head up to relieve compression  
4) Trendelenberg position (bed foot raised)  
5) Infuse 500ml NS in bladder (relieve compression)  
6) ELSCS as indicated  
(if anticipated cord prolapse, i.e polyhydramnios, check OT availability and inform anest)

**Shoulder dystocia** – difficult delivery of shoulder  
The HELPERR Mnemonic

**H**Call for help.  
This refers to activating the pre-arranged protocol or requesting the appropriate personnel to respond with necessary equipment to the labor and delivery unit.  
**E**Evaluate for episiotomy.  
Episiotomy should be considered throughout the management of shoulder dystocia but is necessary only to make more room if rotation maneuvers are required. Shoulder dystocia is a bony impaction, so episiotomy alone will not release the shoulder. Because most cases of shoulder dystocia can be relieved with the McRoberts maneuver and suprapubic pressure, many women can be spared a surgical incision.  
**L**Legs (the McRoberts maneuver)  
This procedure involves flexing and abducting the maternal hips, positioning the maternal thighs up onto the maternal abdomen. This position flattens the sacral promontory and results in cephalad rotation of the pubic symphysis. Nurses and family members present at the delivery can provide assistance for this maneuver.  
**P**Suprapubic pressure  
The hand of an assistant should be placed suprapublically over the fetal anterior shoulder, applying pressure in a cardiopulmonary resuscitation style with a downward and lateral motion on the posterior aspect of the fetal shoulder. This maneuver should be attempted while continuing downward traction.  
**E**Enter maneuvers (internal rotation)  
These maneuvers attempt to manipulate the fetus to rotate the anterior shoulder into an oblique plane and under the maternal symphysis. These maneuvers can be difficult to perform when the anterior shoulder is wedged beneath the symphysis. At times, it is necessary to push the fetus up into the pelvis slightly to accomplish the maneuvers.  
**R**Remove the posterior arm.  
 Removing the posterior arm from the birth canal also shortens the bisacromial diameter, allowing the fetus to drop into the sacral hollow, freeing the impaction. The elbow then should be flexed and the forearm delivered in a sweeping motion over the fetal anterior chest wall. Grasping and pulling directly on the fetal arm may fracture the humerus.  
**R**Roll the patient.  
The patient rolls from her existing position to the all-fours position. Often, the shoulder will dislodge during the act of turning, so that this movement alone may be sufficient to dislodge the impaction. In addition, once the position change is completed, gravitational forces may aid in the disimpaction of the fetal shoulders.
McRobert’s position

ENTER Maneuver

Rubin II
At vaginal examination apply pressure as indicated, if shoulders move into the oblique diameter, attempt delivery.

Rubin II + Woods corkscrew maneuver
If unsuccessful, add the Woods corkscrew maneuver and continue rotation in the same direction. Use both hands and apply pressure as indicated. If shoulders now move into the oblique, attempt delivery. If this is unsuccessful, continue rotation 180 degrees and deliver.

Reverse Woods corkscrew maneuver
If the last maneuver is unsuccessful, change to reverse Woods corkscrew maneuver. Slide fingers down to back of posterior shoulder and attempt 180-degree rotation in the opposite direction.

NOTE: Rubin I = suprapubic pressure.

Maneuvers of Last Resort for Shoulder Dystocia

Deliberate clavicle fracture
Direct upward pressure on the mid-portion of the fetal clavicle; reduces the shoulder-to-shoulder distance.

Zavanelli maneuver
Cephalic replacement followed by cesarean delivery; involves rotating the fetal head into a direct occiput anterior position, then flexing and pushing the vertex back into the birth canal, while holding continuous upward pressure until cesarean delivery is accomplished. Tocolysis may be a helpful adjunct to this procedure, although it has not been proved to enhance success over cases in which it was not used. An operating team, anesthesiologist, and physicians capable of performing a cesarean delivery must be present, and this maneuver should never be attempted if a nuchal cord previously has been clamped and cut.

General anesthesia

Abdominal surgery with hysterotomy

Symphysiotomy
Normal 6-21.
< 6 = Oligohydramnios
> 21 or single pocket 8cm = polyhydramnios

4 common conditions of woman in labour

<table>
<thead>
<tr>
<th>Liquor Adequate CL</th>
<th>Liquor Adequate meconium stained</th>
</tr>
</thead>
<tbody>
<tr>
<td>= best outcome</td>
<td>= poor outcome</td>
</tr>
<tr>
<td>Liquor Inadequate CL</td>
<td>Liquor inadequate Meconium stained</td>
</tr>
<tr>
<td>= watch out</td>
<td>= very poor outcome</td>
</tr>
</tbody>
</table>

**Induction of labour (IOL)**

Indications
1) GDM
2) PIH, PE, E
3) post date EDD + 9/7
4) Indeterminate APH
5) PROM > 24hrs
6) reduced FM at term

Bishop Score

> 6/10 = labour likely to progress spontaneously
< 6/10 = labour unlikely to progress without induction

<table>
<thead>
<tr>
<th>BISHOP SCORE = ................... (total)</th>
<th>Date of Bishop Score: ....../....../.....</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>0</td>
</tr>
<tr>
<td>Dilation</td>
<td>Closed</td>
</tr>
<tr>
<td>Length</td>
<td>&gt; 4</td>
</tr>
<tr>
<td>Consistency</td>
<td>Firm</td>
</tr>
<tr>
<td>Position</td>
<td>Posterior</td>
</tr>
<tr>
<td>Head: station</td>
<td>-3</td>
</tr>
</tbody>
</table>

**Methods:**
1) stretch and sweep
2) ARM
3) Intra Vaginal Prostaglandin (Prostin- PGE2-3mg) / Cervical (cervagem)
4) IV Oxytocin (Pitocin)

* Prev scars maximum prostin x 2 (KIV 3rd after d/w specialist)

Complications: failed IOL (for EMLSCS), hyperstimulation (taper down or off augmentation)

NOT TO ALLOW post dates!
1) GDM
2) PIH, PE, Eclampsia
3) Indeterminate APH
APH
1) Placenta Praevia
2) Placenta abruptio
3) Indeterminate APH = PV bleeding >22 weeks, after rule out Placenta praevia and Abruptio

Placenta Praevia
- can only diagnose after 28 weeks (<28wks known as LOW LYING placenta)
  a) Minor
     Type I - lower part of placenta is >5cm from Os
     Type II - lower segment of placenta is <5cm from Os
  b) Major
     Type III – placenta covers Os partly, covers fully when dilated
     Type IV – placenta covers Os fully, even when not dilated

Placenta abruptio
- PA: hard, woody hard, large abdomen
- concealed/revealed
- per speculum, massive PV bleed from Os
Anemia Hb < 10
1) Iron Deficiency Anemia
Symptoms: sideropenic changes-brittle hair/nails, pallor, tachycardia, palpitations
- FBC: Hb, MCV / MCH decreased
- Anemic profile: serum Iron decreased, Ferritin increased, TIBC increased, UIBC increased
- Full Blood picture = to investigate (Microcytic, Hypochromic cells)
Mx: double hematins, ferrous fumarate, folic acid

2) Thallasemia (α-thalasemia is most common in Southeast Asia.)
- FBC: Hb, MCV / MCH decreased
- Anemic profile may be normal
- Full Blood picture: Target cells
- Hb analysis

3) B12/ folate deficiency anemia
- FBC: Hb decrease, MCV/MCH increased
- Anemic profile normal
- Full blood picture: megaloblastic, hyperchromic
- serum B12/folate decrease
* pernicious anemia – decreased intrinsic factor (gastric pb)

Hypertension
- BP systolic > 140/ diastolic >90

1) Essential HPT / secondary HPT
2) PIH – Pregnancy induced, > 22wks,
Late onset PIH

3) Pre Eclampsia – Edema+Proteinuria + Hypertension (EPH complex)
UFEME Pro +, Uric acid elevated, ALT/Plt elevated (HELLP), Creatinine elevated

4) Eclampsia (Edema, proteinuria, hypertension + seizures)
- headache, nausea, vomiting, epigastric pain, blurring of vision, hyperreflexia
Mx: Mg So4 bolus and maintenance (refer to appendix for dose)
1) bed rest
2) monitor vitals BP 4hrly
3) PE profile: UFEME, 24hr urine protein, Uric acid, FBC (plt),
4) PE chart: BP, PR, Blurring vision, Reflexes

Anti HPT
IV Adalat 10mg
IV Labetalol 100-200-300mg
IV Hydrazaline 5mg
IV Methylldopa 125-250mg
**Miscarriage**

1) **Incomplete miscarriage**  
Sx: passed out parts of POC, abd pain, PV bleed  
U/S: evidence of retained POC-heterogenous echogeneticity in uterus  
- VE/speculum, if POC visualized, removed using sponge forceps, identify parts (fetus/placenta/gestational sac), send HPE  
Plan: scan to determine any retained products, IVD, if retained = emergency ERPOC

2) **Threatened miscarriage**  
Sx: bleeding, prem contractions  
U/S- viable fetus, FH activity present, - measure CRL for dating  
- TCA for scan later to confirm viability, TCA stat if pass out POC, reduced FM, PV bleed, abd pain

3) **Missed miscarriage**  
U/S: collapsed empty IUGS, TAS >25mm / TVS >20mm  
Discharge, TCA later for scan

4) **Molar pregnancy**  
U/S: - no fetal pole- only vesicles, snowstorm appearance  
- Beta HCG

5) **TRO ectopic pregnancy**  
Sx: flank pain, cervical excitation + (abd pain elicited on VE), UPT +  
U/S: empty uterus, presence of adnexal mass with free fluid  
- take beta HCG
Ovarian Cysts
Ovarian cysts are usually seen in three (3) forms:

<table>
<thead>
<tr>
<th>Follicular or Functional Ovarian Cysts</th>
<th>Corpus Luteal Ovarian Cysts</th>
<th>Endometrioma or Chocolate Cysts</th>
</tr>
</thead>
<tbody>
<tr>
<td>- cyst that forms during process of follicle growth, usually ruptured during ovulation, self limiting</td>
<td>- cyst forming after ovulation, Corpus luteum that is &gt;3cm</td>
<td>- endometriosis of ovary</td>
</tr>
<tr>
<td></td>
<td>Tx: surgical cystectomy</td>
<td>- respond to menstruation, filled with chocolate type material</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- a ruptured cyst may form adhesions</td>
</tr>
</tbody>
</table>

Sx: pelvic pain in cysts >10cm

Complications: ruptured cyst, twisted/torsion of ovarian cyst

Other location of cyst

Polycystic Ovarian Syndrome

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1) prechemo Ix = FBC/RP/ Ca markers (CA125/CEA/AFP) or B-HCG depending on hx (if >30 years + RBS)
2) Gynae clerking
3) Trace blood Ix, inform consultant the results,

4) Branula: max 2 attempts allowed, if unable to set, get superior to try
5) Chemo chart- every patient has a chemo chart with regime, diagnosis, how many cycles, next CT scan etc - select the appropriate form and fill in:

<table>
<thead>
<tr>
<th>Date</th>
<th>Hb</th>
<th>Plt</th>
<th>TWC / ANC</th>
<th>Creat</th>
<th>CrCl</th>
<th>K+</th>
<th>Na+</th>
<th>Urea</th>
<th>Ca markers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm:</td>
<td>&gt;10</td>
<td>&gt;100K</td>
<td>&gt;3K</td>
<td>&lt;177</td>
<td>&gt;50</td>
<td>3.3-5.0</td>
<td>135-145</td>
<td>2.6-7.7</td>
<td></td>
</tr>
</tbody>
</table>

Absolute Neutrophil Count > 2.0, if <2.0 to give Neupogen prior to chemo

* prepare chemo chart, observation chart and medication chart before rounds
* prepare needles Green/pink, plaster (bandaid), 3M plasters, gloves, swab, syringes, branulas

* principle – to get a good line, to maintain line (run NS fast)

Radiotherapy
Indicated in Cervical cancer
Gestational Trophoblastic Disease
PTD = Progressive Trophoblastic Disease

Regimes

**Single Agent Methotrexate (WHO score <7) 10 days**

| Day 1- IV MTX 50mg in 200ml D5% over 15mins |
| Day 2- IM Folinic Acid 6mg (30hrs later) |
| Day 3 MTX …. Day 4 Folinic Acid….* alternate to complete 10 days |

_Repeat after interval of 7 days, to complete 2 more cycles after BHCG <2 IU/L._

---

**MTX-Actinomycin-D regime 10 days**

| D1 - IV MTX 50mg in 200ml D5% over 15mins |
| D2 - IV Actinomycin-D 0.5mg bolus + IM Folinic Acid 6mg |
| D3 MTX….D4 Actino-D + FA….alternate up to 10 days |

_Repeat after interval of 7 days, to complete 2 more cycles after BHCG <2 IU/L._

---

**MA regime (high risk) 4 days**

| Pre-med (D1-2) (30 mins before chemo) : IV Dexamethasone 8mg bolus + IV Odansetron 8mg |
| Prehydration (D1-2): IV D/S 500ml over 30mins |

_**Chemo:**_

| D1: PM+PH - IV Actinomycin-D 0.5mg bolus + MTX 100mg/m² bolus + IV MTX 200mg/m² in 500ml NS over 12hrs |
| D2: PM+PH - IV Actinomycin-D 0.5mg bolus + IM Folinic Acid 30mg + IM Folinic Acid (12hrs later) |
| D3: IM Folinic Acid 30mg + IM Folinic Acid (12hrs later) |
| D4: IM Folinic Acid 30mg |

_Repeat after 7 days interval to complete 2 more cycles after BHCG < 2 IU/L._

---

WHO score >7

**EMA-CO =** Etoposide - MTX - Actinomycin (1st week) + Cyclophosphamide - Oncovin (Vincristine) (2nd week)

* If fail EMA-CO fail..

**EMA-CE =** Etoposide - MTX - Actinomycin (1st week) + Cisplatin- Etoposide (2nd week)

*After 3-4 weeks normal BHCG, observe monthly BHCG for 2 years*
Ovarian Cancer
Epithelial ovarian cancer
Epithelial tumors represent the most common histology (90%) of ovarian tumors. Other histologies include the following:

- Sex-cord stromal tumors
- Germ cell tumors
- Primary peritoneal carcinoma
- Metastatic tumors of the ovary

Five main histologic subtypes, which are similar to carcinoma, arise in the epithelial lining of the cervix, uterus, and fallopian tube,

- Serous (from fallopian tube)
- Endometrioid (endometrium)
- Mucinous (cervix)
- Clear cell (mesonephros)
- Brenner

Stage IA: Growth limited to 1 ovary, no tumor on the external surface, capsule intact, no ascites present containing malignant cells
Stage IB: Growth limited to both ovaries, no tumor on the external surfaces, capsules intact, no ascites present containing malignant cells
Stage IC: Tumor either stage IA or IB, but with tumor on surface of 1 or both ovaries with capsule ruptured,* with ascites present containing malignant cells, or with positive peritoneal washings

Stage II: Growth involving 1 or both ovaries with pelvic extension
Stage IIA: Extension and/or metastases to the uterus and/or tubes
Stage IIB: Extension to other pelvic tissues
Stage IIC: Tumor either stage IIA or IIB, but with tumor on surface of 1 or both ovaries, with capsule(s) ruptured,* with ascites present containing malignant ovaries, or with positive peritoneal washings

Stage III: Tumor involving 1 or both ovaries with histologically confirmed peritoneal implants outside pelvis and/or positive retroperitoneal or inguinal nodes; superficial liver metastasis; tumor limited to true pelvis, but with histologically proven malignant extension to small bowel and omentum
Stage IIIA: Tumor grossly limited to the true pelvis, with negative nodes, but with histologically confirmed microscopic seeding of abdominal peritoneal surfaces or histologically proven extension to small bowel mesentery
Stage IIIB: Tumor of 1 or both ovaries with histologically confirmed implants, peritoneal metastasis of abdominal peritoneal surfaces ≤ 2 cm in diameter; nodes are negative
Stage IIIC: Peritoneal metastasis beyond the pelvis > 2 cm in diameter and/or positive retroperitoneal or inguinal nodes

Stage IV: Growth involving 1 or both ovaries with distant metastases; if pleural effusion is present, positive cytology must be apparent to allot a case to stage IV; parenchymal liver metastasis qualifies as stage IV disease
### Table. TNM and FIGO Classifications for Ovarian Cancer

#### Primary tumor (T)

<table>
<thead>
<tr>
<th>TNM FIGO</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td>Primary tumor cannot be assessed</td>
</tr>
<tr>
<td>T0</td>
<td>No evidence of primary tumor</td>
</tr>
<tr>
<td>T1 I</td>
<td>Tumor limited to the ovaries (1 or both)</td>
</tr>
<tr>
<td>T1a IA</td>
<td>Tumor limited to 1 ovary; capsule intact, no tumor on ovarian surface; no malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T1b IB</td>
<td>Tumor limited to both ovaries; capsules intact, no tumor on ovarian surface; no malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T1c IC</td>
<td>Tumor limited to 1 or both ovaries with any of the following: capsule ruptured, tumor on ovarian surface, malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T2 II</td>
<td>Tumor involves 1 or both ovaries with pelvic extension</td>
</tr>
<tr>
<td>T2a IIA</td>
<td>Extension and/or implants on the uterus and/or tube(s); no malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T2b IIB</td>
<td>Extension to other pelvic tissues; no malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T2c IIC</td>
<td>Pelvic extension (T2a or T2b) with malignant cells in ascites or peritoneal washings</td>
</tr>
<tr>
<td>T3 III</td>
<td>Tumor involves 1 or both ovaries with microscopically confirmed peritoneal metastasis outside the pelvis</td>
</tr>
<tr>
<td>T3a IIIA</td>
<td>Microscopic peritoneal metastasis beyond the pelvis (no macroscopic tumor)</td>
</tr>
<tr>
<td>T3b IIIB</td>
<td>Macroscopic peritoneal metastasis beyond the pelvis &gt; 2 cm or less in greatest dimension</td>
</tr>
<tr>
<td>T3c IIIC</td>
<td>Macroscopic peritoneal metastasis beyond the pelvis &gt; 2 cm in greatest dimension and/or regional lymph node metastasis</td>
</tr>
</tbody>
</table>

#### Regional lymph nodes (N)

<table>
<thead>
<tr>
<th>TNM FIGO</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NX</td>
<td>Regional lymph nodes cannot be assessed</td>
</tr>
<tr>
<td>N0</td>
<td>No regional lymph node metastasis</td>
</tr>
<tr>
<td>N1 IIIC</td>
<td>Regional lymph node metastasis</td>
</tr>
</tbody>
</table>

#### Distant metastasis (M)

<table>
<thead>
<tr>
<th>TNM FIGO</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0</td>
<td>No distant metastasis</td>
</tr>
<tr>
<td>M1 IV</td>
<td>Distant metastasis (exclude peritoneal metastasis)</td>
</tr>
</tbody>
</table>

#### Notes:
- The presence of nonmalignant ascites is not classified. The presence of ascites does not affect staging unless malignant cells are present.
- Liver capsule metastasis is T3/stage III; liver parenchymal metastasis, M1/stage IV. Pleural effusion must have positive cytology for M1/stage IV.

#### Prognosis

5 year survival rate

- Stage IA - 87%
- Stage IB - 71%
- Stage IC - 79%
- Stage IIA - 67%
- Stage IIB - 55%
- Stage IIC - 57%
- Stage IIIA - 41%
- Stage IIIB - 25%
- Stage IIIC - 23%
- Stage IV - 11%
- Overall survival rate – 46%

#### Metastasis
- peritoneal (diaphragm, paracolic gutters, bladder, liver,mesentery, serosa of bowel, omentum, uterus)
- pleural cavity, lungs, and groin lymph nodes.
Chemotherapy for Ovarian tumours

Regimes
Epithelial ovarian cancer
1. Carbo/Paclitaxel (Carbo/Taxol)
2. Single Carbo
3. Carbo/ Liposomal Doxorubicin (CAELYX)
4. Carbo/Doxorubicin

<table>
<thead>
<tr>
<th>Premeds 0000Hr: IV Dexamethasone 8mg bolus + IV Kytril 8mg</th>
<th>prehydration: IV 500ml D/s over 30mins</th>
<th>chemotherapy: given over 1hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home: T. Maxalon 10mg tds 3/7 + T. Ranitidine 150mg BD 3/7 + T. Dexamethasone 2mg tds 3/7 (Cl in DM)</td>
<td>* TCA Day 10 for FBC, TCA 3 weeks for next cycle (3 weekly x 6)</td>
<td></td>
</tr>
</tbody>
</table>

Recurrent Epithelial Ovarian Ca

Carboplatin + gemcitabine (3 weekly x 6 cycles)

<table>
<thead>
<tr>
<th>D1: Premeds + Prehydration + IV Gemcitabine + IV Carboplatin</th>
<th>Home: T. Maxalon 10mg tds 3/7 + T. Ranitidine 150mg BD 3/7 + T. Dexamethasone 2mg tds 3/7 (Cl in DM) *TCA Day 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>D8: Premeds + Prehydration + IV Gemcitabine</td>
<td>Home: T. Maxalon 10mg tds 3/7 + T. Ranitidine 150mg BD 3/7 + T. Dexamethasone 2mg tds 3/7</td>
</tr>
</tbody>
</table>

Germ cell Tumour
BEP: Bleomycin, Etoposide, Cisplatin

* strict I/O chart

<table>
<thead>
<tr>
<th>D1: [Hydration] + [Premeds+furosemide] + [IV Etoposide] - Mannitol + [IV Cisplatin] - [Hydration] + IM Bleomycin</th>
</tr>
</thead>
<tbody>
<tr>
<td>D2: [Hydration] + [Premeds+furosemide] + [IV Etoposide] - Mannitol + [IV Cisplatin] - [Hydration] + IM Bleomycin</td>
</tr>
<tr>
<td>D3 : [Hydration] + [Premeds+furosemide] + [IV Etoposide] - Mannitol + [IV Cisplatin] + [Hydration]</td>
</tr>
<tr>
<td>D8 : IM Bleomycin</td>
</tr>
<tr>
<td>D15 : IM Bleomycin</td>
</tr>
</tbody>
</table>
Table. TNM and FIGO Classifications for Cervical Cancer

<table>
<thead>
<tr>
<th>TNM</th>
<th>FIGO</th>
<th>Surgical-Pathologic Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td></td>
<td>Primary tumor cannot be assessed</td>
</tr>
<tr>
<td>T0</td>
<td>I</td>
<td>No evidence of primary tumor</td>
</tr>
<tr>
<td>Tis</td>
<td>IA</td>
<td>Carcinoma in situ (preinvasive carcinoma)</td>
</tr>
<tr>
<td>T1</td>
<td>I</td>
<td>Cervical carcinoma confined to the cervix (disregard extension to the corpus)</td>
</tr>
<tr>
<td>T1a</td>
<td>IA</td>
<td>Invasive carcinoma diagnosed only by microscopy; stromal invasion with a maximum depth of 5.0 mm measured from the base of the epithelium and a horizontal spread of 7.0 mm or less; vascular space involvement, venous or lymphatic, does not affect classification</td>
</tr>
<tr>
<td>T1a1</td>
<td>IA1</td>
<td>Measured stromal invasion $\leq 3.0$ mm in depth and $\leq 7.0$ mm in horizontal spread</td>
</tr>
<tr>
<td>T1a2</td>
<td>IA2</td>
<td>Measured stromal invasion $&gt; 3.0$ mm and $\leq 5.0$ mm with a horizontal spread $\leq 7.0$ mm</td>
</tr>
<tr>
<td>T1b</td>
<td>IB</td>
<td>Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2</td>
</tr>
<tr>
<td>T1b1</td>
<td>IB1</td>
<td>Clinically visible lesion $\leq 4.0$ cm in greatest dimension</td>
</tr>
<tr>
<td>T1b2</td>
<td>IB2</td>
<td>Clinically visible lesion $&gt; 4.0$ cm in greatest dimension</td>
</tr>
<tr>
<td>T2</td>
<td>II</td>
<td>Cervical carcinoma invades beyond uterus but not to pelvic wall or to lower third of vagina</td>
</tr>
<tr>
<td>T2a</td>
<td>IIA</td>
<td>Tumor without parametrial invasion</td>
</tr>
<tr>
<td>T2a1</td>
<td>IIA1</td>
<td>Clinically visible lesion $\leq 4.0$ cm in greatest dimension</td>
</tr>
<tr>
<td>T2a2</td>
<td>IIA2</td>
<td>Clinically visible lesion $&gt; 4.0$ cm in greatest dimension</td>
</tr>
<tr>
<td>T2b</td>
<td>IIB</td>
<td>Tumor with parametrial invasion</td>
</tr>
<tr>
<td>T3</td>
<td>III</td>
<td>Tumor extends to pelvic wall and/or involves lower third of vagina and/or causes hydronephrosis or nonfunctional kidney</td>
</tr>
<tr>
<td>T3a</td>
<td>IIIA</td>
<td>Tumor involves lower third of vagina, no extension to pelvic wall</td>
</tr>
<tr>
<td>T3b</td>
<td>IIIB</td>
<td>Tumor extends to pelvic wall and/or causes hydronephrosis or nonfunctional kidney</td>
</tr>
<tr>
<td>T4</td>
<td>IV</td>
<td>Tumor invades mucosa of bladder or rectum and/or extends beyond true pelvis (bullous edema is not sufficient to classify a tumor as T4)</td>
</tr>
<tr>
<td>T4a</td>
<td>IVA</td>
<td>Tumor invades mucosa of bladder or rectum (bullous edema is not sufficient to classify a tumor as T4)</td>
</tr>
<tr>
<td>T4b</td>
<td>IVB</td>
<td>Tumor extends beyond true pelvis</td>
</tr>
</tbody>
</table>

**Regional lymph nodes (N)**

| NX | Regional lymph nodes cannot be assessed |
| N0 | No regional lymph node metastasis |
| N1 | Regional lymph node metastasis |

**Distant metastasis (M)**

| M0 | No distant metastasis |
| M1 | Distant metastasis (including peritoneal spread; involvement of supraclavicular, mediastinal, or para-aortic lymph nodes; and lung, liver, or bone) |

Prognosis of cervical cancer depends on disease stage. In general, the 5-year survival rates are as follows:

- Stage I - Greater than 90%
- Stage II - 60-80%
- Stage III - Approximately 50%
- Stage IV - Less than 30%

For early invasive cancer, surgery is the treatment of choice. In more advanced cases, radiation combined with chemotherapy is the current standard of care.

Treatment by Stage

- I – Loop Excision
- IA1 = Total hysterectomy, radical hysterectomy, and conisation
- IA2, IB, IIA = radiation with brachytherapy or radical hysterectomy with bilateral pelvic lymphadenectomy
- IIB-IVA = Radiation therapy + cisplatin-based chemotherapy
## PAP smear

### Parameters

<table>
<thead>
<tr>
<th>Age to start screening</th>
<th>Begin screening with cytology at 21 years old, regardless of sexual history</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening interval age</td>
<td>Screen with cytology alone every 3 years.* HPV testing should not be used in this age group.</td>
</tr>
<tr>
<td>21–29</td>
<td></td>
</tr>
<tr>
<td>Screening interval age</td>
<td>Screen with a combination of cytology and HPV testing every 5 years (preferred) or cytology alone every 3 years. Screening by HPV testing alone is generally not recommended.*</td>
</tr>
<tr>
<td>30–65</td>
<td></td>
</tr>
<tr>
<td>Age to stop screening</td>
<td>Age 65, if the woman has adequate negative prior screening and is not otherwise at high risk for cervical cancer</td>
</tr>
<tr>
<td>Screening after hysterectomy</td>
<td>Not indicated for women without a cervix and without a history of a high-grade precancerous lesion (eg, CIN2 or CIN3) in the past 20 years or cervical cancer ever</td>
</tr>
<tr>
<td>HPV-vaccinated women</td>
<td>Screen according to the same recommendations as for unvaccinated women</td>
</tr>
</tbody>
</table>

### ACS Recommendations

<table>
<thead>
<tr>
<th>PAP smear results</th>
<th>Negative for intraepithelial lesion or malignancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epithelial cell abnormality</td>
<td></td>
</tr>
</tbody>
</table>

### Squamous cell

- Atypical squamous cells (ASC) of undetermined significance (ASC-US) or atypical squamous cells that cannot exclude HSIL (ASC-H)
- Low-grade squamous intraepithelial lesions (LSIL), includes human papillomavirus (HPV), mild dysplasia, and CIN 1
- High-grade squamous intraepithelial lesions (HSIL), includes moderate to severe dysplasia, carcinoma in situ, CIN 2, and CIN 3
- Squamous cell carcinoma

### Glandular cell

- Atypical glandular cells (AGC), specify endocervical, endometrial, or not otherwise specified (NOS)
- Atypical endocervical cells, favor neoplastic, specify endocervical or NOS
- Endocervical adenocarcinoma in situ (AIS)
- Adenocarcinoma
Management of women with ASC-US

Women age 21 or greater with ASC-US
- Perform reflex HPV testing
- If positive for HPV, then proceed with colposcopy
- If negative for HPV, then repeat Pap smear in 12 months

Women age 20 or less with ASC-US
- Repeat Pap smear at 12 months
- If repeat cytology shows HSIL or worse, perform colposcopy; otherwise repeat cytology after 12 months
- If second repeat cytology is negative, routine screening may be resumed; if ASC or greater, proceed with colposcopy.

Pregnant women with ASC-US
- Managed same as nonpregnant women; endocervical curettage (ECC) is contraindicated in pregnant women and should not be collected if colposcopy is performed. Deferring colposcopy until at least 6 weeks postpartum is also possible.

Management of women with ASC-H
- Refer to colposcopy

Management of women with LSIL

Women age 21 or greater with LSIL
- Refer to colposcopy

Women age 20 or less with LSIL
- Repeat pap smear in 12 months; follow guidelines for ASC-US

Pregnant women with LSIL:
- Managed same as non-pregnant women; endocervical curettage (ECC) is contraindicated in pregnant women, and should not be collected if colposcopy is performed. It is also acceptable to defer colposcopy until at least 6 weeks postpartum.

Postmenopausal women with LSIL
- Acceptable options include reflex HPV testing, repeat Pap at 6 and 12 months, and colposcopy. If HPV negative or no CIN on colposcopy, repeat cytology in 12 months.

Management of women with HSIL
- Refer to colposcopy regardless of age

Pregnant women with HSIL
- Managed same as nonpregnant women; endocervical curettage (ECC) is contraindicated in pregnant women and should not be collected if colposcopy is performed.

Management of women with AGC

Women with AGC, including ASC-NOS, AGC-favor neoplasia, and AIS
- Refer to colposcopy with endocervical sampling and HPV DNA testing
- If age 35 or greater or with other risk factors for endometrial neoplasia, endometrial sampling should also be performed.

Women with atypical endometrial cells:
- Perform endometrial biopsy and endocervical sampling. If no pathology found, proceed with colposcopy.

Management of women with benign endometrial cells found in cervical cytology
- No additional evaluation is required in asymptomatic premenopausal women
- In postmenopausal women, perform endometrial biopsy

Management of women age 30 and older who are Pap negative and HPV positive
Repeat Pap and HPV DNA testing in 12 months
- If Pap negative, HPV negative, rescreen no sooner than 3 years
- If Pap abnormal with any HPV result, follow ASCCP guidelines
- If Pap negative, HPV positive, refer to colposcopy

Another option would be to perform HPV 16 and 18 testing
- If 16 or 18 positive, refer to colposcopy
- If 16 and 18 negative, repeat Pap and HPV testing in 12 months
- If Pap negative, HPV negative, rescreen no sooner than 3 years
- If Pap abnormal with any HPV result, follow ASCCP guidelines
- If Pap negative HPV positive, refer to colposcopy
Pipelle sampling

**Indication**
Abnormal uterine bleeding
Postmenopausal bleeding
Cancer screening (e.g., hereditary nonpolyposis colorectal cancer)
Detection of precancerous hyperplasia and atypia
Endometrial dating
Follow-up of previously diagnosed endometrial hyperplasia
Evaluation of patient with one year of amenorrhea
Evaluation of infertility
Abnormal Papanicolaou smear with atypical cells favoring endometrial origin

**Findings**
Normal endometrial tissue may be described as proliferative (estrogen effect) or secretory (progesterone effect) endometrium. Hormone therapy can be offered to patients with abnormal vaginal bleeding who have normal endometrial tissue on biopsy.

Atrophic endometrium generally yields scant or insufficient tissue for diagnosis. Hormonal therapy may be considered for patients with atrophic endometrium.

Cystic or simple hyperplasia progresses to cancer in less than 5 percent of patients. Most individuals with simple hyperplasia without any atypia can be managed with hormonal manipulation (medroxyprogesterone [Provera], 10 mg daily for five days to three months) or with close follow-up.

Atypical complex hyperplasia is a premalignant lesion that progresses to cancer in 30 to 45 percent of women. Some physicians will treat complex hyperplasia with or without atypia with hormonal therapy (medroxyprogesterone, 10 to 20 mg daily for up to three months). D&C procedure to exclude the presence of endometrial carcinoma and consider hysterectomy for complex or high-grade hyperplasia.

Biopsy specimens that suggest the presence of endometrial carcinoma (75 percent are adenocarcinoma) recommended surgical therapy.
A colposcopy is done when a Pap test result shows abnormal changes in the cells of the cervix or to assess the following:

Genital warts on the cervix
Cervicitis
Benign growths (polyps)
Pain
Bleeding

Findings:
Gynae onco surgeries
TAHBSO – Total abdominal hysterectomy with bilateral salpingoophorectomy
TLHBSO – Total laparoscopic hysterectomy with bilateral salpingoophorectomy
+ PLND = peripheral lymph node dissection
+ appendectomy+omentectomy
TVH- Total vaginal hysterectomy
ERPOC = evacuation of retained products of conception
Marsupialization of Bartholin cyst
D&C / DD&C = (diagnostic) dilatation and curettage
Diagnostic Lap – diagnostic laparoscopy
Cystectomy
Biopsy – cone, LLETZ.
DISCHARGING PATIENTS

Indication: Primid/instrumental delivery ~12hours, multipara 6hours

1) Order in system: Procedure (Vertex delivery/vacuum/forceps)
2) Order medications: Hematinics/Chlorhexidine/Mefenemic Acid/Gelusil
3) Discharge Advice
4) Discharge summary
5) Discharge plan:
   Allow discharge with ponstan/gelusil/hematinics/chlorhexidine
   Encourage breastfeeding/perineum/ cord care at home
   TCA KK in 6 weeks for postnatal review and contraception
   TCA stat if fever / abdominal pain/ foul smelling PV discharge/ excessive PV bleeding

* post LSCS – TCA 2/52 KK for WI
* HTN – EOD BP monitoring in KK for 2/52 / home visit
* GDM – TCA 6/52 KK to repeat MGTT
Operative Notes

DIAGNOSTIC LAPAROSCOPY, DYE HYDROTUBATION, OVARIAN DRILLING

PROCEDURE
PATIENT PUT IN LOYD DAVIES POSITION
ABDOMEN AND PERINEUM CLEANED AND DRAPE
BLADDER EMPTIED WITH METAL CATHETER
SIMS SPECULUM INSERTED TO RETRACT POSTERIOR VAGINAL WALL.
ANTERIOR LIP OF CERVIX CAUGHT WITH VUSELLUM.
CERVICAL OS DILATED TO HAGAR 5
UTERINE MANIPULATOR INSERTED
SUBUMBILICAL INCISION MADE
VERESS NEEDLE WAS INSERTED THROUGH SUBUMBILICAL INCISION
AND THE PERITONEAL CAVITY WAS INFLATED WITH CO2 TILL ADEQUATE PNEUMOPERITONEUM.
SUBUMBILICAL PORT 5MM INSERTED
FINDINGS AS NOTED
LEFT FLANK AND LIF PORT 5MM (X2) INSERTED UNDER DIRECT VISION.
PROCEEDED TO ADHESIONOLYSIS
HYDROSALPHINX DRAINED BILATERALLY
HYDROTUBATION NOT DONE AS PRESENCE OF ACTIVE PID
NO ACTIVE BLEEDING NOTED.
GAS EVACUATED AND THE TROCARS REMOVED UNDER DIRECT VISION
SKIN CLOSED WITH SKIN GLUE

POST OPERATIVE ORDERS
TRANSFER PT TO WARD ONCE PT STABLE.
BP/PR MONITORING ¼ HRLY TILL STABLE.
ALLOW ORALLY AS TOLERATED.
BP/PR MONITORING ¼ HRLY TILL STABLE.
PAD CHARTING. INFORM STAT IF INCREASE PV BLEED
T. MEFENEMIC ACID 11/11 TDS AND T. GELUSIL 11/11 TDS.
DISCHARGE PM IF WELL
TCA 6/52 TO REVIEW, TO SEE DR

HYSTEROSCOPY

PROCEDURE
PATIENT WAS PUT UNDER SPINAL ANAESTHESIA IN LITHOTOMY POSITION
PERINEUM CLEANED AND DRAPE
BLADDER EMPTIED USING METAL CATHETER.
EXAMINATION UNDER ANAESTHESIA DONE AND FINDINGS AS NOTED.
SIMS SPECULUM WAS INSERTED TO RETRACT POSTERIOR VAGINA WALL.
THE ANTERIOR CERVICAL LIP IS HELD WITH A VUSELLUM.
HYSTEROSCOPY DONE
FINDINGS AS NOTED.
D+C DONE – SCC ENDOMETRIUM REMOVED
NO ACTIVE PV BLEEDING NOTED.
CBD INSERTED

ESTIMATED BLOOD LOSS:
HPE SENT ENDOMETRIAL TISSUE

POST OPERATIVE ORDERS
TRANSFER PT TO WARD WHEN PT STABLE.
KEEP SUPINE POSITION FOR 6 HOURS.
ALLOW ORALLY AS TOLERATED.
BP/PR MONITORING ¼ HRLY TILL STABLE.
PAD CHARTING. INFORM STAT IF INCREASE PV BLEED
T. MEFENAMIC ACID 11/11 TDS AND T. GELUSIL 11/11 TDS.
DISCHARGE PM IF WELL
TCA 6/52 TO REVIEW, TO SEE DR
MRP

**Procedure**
Patient positioned supine
area cleaned and draped
vaginal examination done, findings as noted
metal catheter inserted and bladder catheterized
placenta removed in bulk
findings as noted
no active bleeding noted
episiotomy repaired with ecosorb

**Findings:**
Plane identified easily.
Placenta: AUS. Removed in bulk. No difficulty while removing
the placenta.
No active bleeding
episiotomy tear repaired with ecosorb fast 2-0

**Plan:**
transfer to postnatal ward once patient stable
vital signs monitoring 1/4 hrly till stable
Lie in supine position for 6 hours
allow orally once fully conscious
strict pad chart, inform if PV bleeding
IVD 5 pints NSD5% over 24hrs until pt taking orally well
T ponstan / gelusil 2 tds
Off CBD CM

**LOWER SEGMENT CAESAREAN SECTION AND BTI**

**PROCEDURE**
patient put in supine position.
ABDOMEN cleaned and draped.
PFANNESTIAL INCISION MADE AND Abdomen opened in layers
UV FOLD IDENTIFIED AND SEPARATED
BLADDER PUSHED AWAY CAUDALLY AND retracted inferiorly with
doyan’s retractor.
transverse incision made at lower segment of uterus.
INCISION EXTENDED WITH BLUNT DISSECTION
AMNIONOMY DONE AND BABY DELIVERED
Placenta and membranes delivered VIA CCT.
Uterus closed in 2 layers with vicryl 1-0
Bilateral fallopian tubes IDENTIFIED TILL FIMBRIAL END AND LIGATED
USING MODIFIED POLMERAY’S METHOD.
Ovaries normal
Haemostasis secured.
Swab and instrument counts were correct.
Rectus sheath was closed with vicryl 1.
Skin was closed VICRYL 2-0.
Vaginal TOILET DONE AND blood clots evacuated.

**ESTIMATED BLOOD LOSS:**

HPE SENT: FALLOPIAN TUBES X2

**POST OPERATIVE MANAGEMENT**
Transfer out to WARD once patient stable.
lie in supine position for 6 hours.
Bp/ pr monitoring ¼ hourly until stable
Cbd for one day
Strict pad charting.
IVD 5 pints of nsd% until patient taking orally well. (IVD REGIME
WILL BE CHANGED ACCORDING TO CASE, IE PRE-ECLAMPSIA)
CONTINUE ANALGESIA AS ORDERED BY ANAESTHETIST (PT WAS GIVEN
INTRATHecal MORPHINE INTRA-OP). SERVE SUP VOREN 75MG BD,
START FIRST DOSE 6 HOURS POST OP
5000u bd TILL AMBULATING WELL
Iv cefobid 1g bd AND Iv metronidazole 500mg tds x 24 HOURS
Wi day 2.
Sto not required

**LAPRAOSCOPIC BILATERAL TUBAL LIGATION**

**PROCEDURE**
PATIENT PUT IN LLOYD DAVIES POSITION
ABDOMEN AND PERINEUM CLEANED AND DRAPED.
BLADDER EMTPTED WITH METAL CATHETER
SUBUMBILICAL INCISION MADE
VERESS NEEDLE WAS INSERTED THROUGH SUBUMBILICAL INCISION
AND THE PERITONEAL CAVITY WAS INSUFFLATED WITH CO2.
SUBUMBILICAL 5MM PORT INSERTED.
FINDINGS AS NOTED
7MM SUPRAPUBIC PORT INSERTED UNDER DIRECT VISION OVER
SUPRAPUBIC AREA.
FALLOPIAN TUBES IDENTIFIED TO FIMBRIAL ENDS AND FALLOPS RINGS
APPLIED.
PORTS REMOVED UNDER DIRECT VISION
PORTS SITES CLOSED SAFIL 2-0

**ESTIMATED BLOOD LOSS:** 100CC

**POST OPERATIVE ORDERS**
TRANSFER PT TO WARD ONCE PT STABLE.
BP/ PR MONITORING ¼ HRLY TILL STABLE.
ALLOW ORALLY ONE FULLY CONSCIOUS.
IVD 5 PINTS DEXTROSE SALINE OVER 24 HOURS TILL TOLERATING
ORALLY WELL
STRCT PAD CHARTING. INFORM STAT IF INCREASE PV BLEED
T. MEFENEMIC ACID 500 MG TDS
T GELUSIL II/II TDS
NO NEED STO
Wl CM
DISCHARGE CM IF WELL
QUICK REFERENCE

Obstetrics Clerking

LMP: EDD:
A/r/s:
Gravidity, Parapartum
SOD/USOD, previously regular menses
Earliest scan @ weeks, subsequent scans correspond to date (*if USOD, scans - REDD given)

ANC: any problems antenatally (anemia, GDM etc)
c/o:
otherwise
no show, no LL, no UTI, no fever, no contraction pain

early preg
booking date, @ KKIA
booking BP / Hb
MGTT done? Indication
Albuminuria/glycosuria
Blood Group
Infections screening

Obstetric hx:
year, mode of delivery, baby sex, weight
Clinical
Pa:
Ve:
Speculum:
cough impulse negative, pooling of liquor, os closed, if discharge/ LL- High Vaginal Swab

u/s:

Management:

Obgyn Review: Labour Delivery Suite

ARM/VE review
Came for delivery
A/R/S
G., P.
ANC:
Examination:
VE:
PA:
NEXT VE @ 1300H

Baby postnatal review
Baby active on handling, rigorous, crying, pink
Non tachypnoic, no nasal flaring, no grunting
HR >100, reflexes intact
Baby discharge to mother

Post natal review:
A/R/S
Para
- Mode of delivery, baby sex, BW, Apgar score, date @ time
- baby to mother/NICU

Intrapartum:
episiotomy/tar repaired
EBL (estimated blood lost)

Clinical
alert, conscious, pink
lungs clear, equal air entry bilaterally
CVS drnm
progress:
no SOB, no chest pain, no giddiness
no calves tenderness
PA
-soft, non tender
uterus well contracted at 22 weeks

VE:
vv NAD, no hematoma, no active bleeding, clots evacuated
no foreign body, all gauze/tampon removed
episiotomy sutured well, sutures intact

DRE:
anal tone intact
no sutures felt

Plan
transfer to postnatal ward
ponstan/gelusil/hematinics
strict pad chart, inform if > 2 pads soaked in 1 hour
perineum & cord care
courage BF & ambulation
contraceptive advice before discharge

Antibx
T. EES 400mg BD
T. Cephalexin 250-500mg BD
IV Ampicillin 2g stat, 1g QID
IV Cefuroxime 1.5gstat, 750 TDS

Anti HPT
IV Labetalol 100-200-300mg
IV Adalat 10mg
IV Hydrazaline 5mg
IV Methylldopa

hematinics
Folic Acid 5mg
Ferrous Fumarate 200mg
Asc Acid 100mg
Vit B complex 1 Tab
Management of common problems

For delivery:
plot partogram
central CTG monitoring and intermittent 2hrly tracing
IVD 4pint HM /24hrs
IM pethidine 75mg + IM phenergan 25mg if CTG reactive
VE on strong contraction
offer entonox
time contraction in 2hrs if suboptimal for augmentation as per protocol

Latent phase of labour
admit ward 4D
CTG daily
FKC
LPC/ FHR 4hrly
VE on Strong contraction/ bearing down/ or LL
FBC, GSH

PROM
admit ward 4D
FBC / GSH / HVS
LPC / FHR 4hrly
strict FK C
CTG daily
strict pad chart - to inform if greenish discharge
watchout for s/s of chorioamnionitis
start IV ampicillin 2g stat, 1g QID if not delivered after
18hr @
KIV IOL if not delivered after 24hr
* if allergic to penicillin – clindamycin

Vaginal Candidiosis
Allow discharge with medication
Canesten pessary 500mg ON 1/7
TCA 2/52 clinic to review HVS
TCA stat if abdominal pain/fever/foul smelling discharge/PV bleed

UTI
Allow discharge with medication
HVS/UFEME/Urine C&S taken-to-trace
T.Cephalixin 500mg tds x 1/52
Sachet Ural 1/1 TDS x3

False labour
Allow home with reassurance
TCA stat if abdominal pain/LL/PV bleed/foul smelling discharge
TCA at EDD +9/7 for IOL if not yet delivered
* GDM/PIH/PE/Indeterminate APH cannot allow post dates

Reduced FM
admit ward 4D
FBC / GSH
LPC / FHR 4hrly
strict FK C
CTG daily
if persistently reduced FM, KIV IOL

Premature contraction
admit HDW
FBC / GSH / HVS / UFEME
LPC / FHR 4hrly
strict FK C
T. adalat 20mg in 4 doses every 15mins
book ventilator
IM dexe 12mg stat then 12hr later

STEROID THERAPY
Dosage
IM Dexamethasone 12mg bd for one day.
The optimal time to deliver after administration of corticosteroid is
more than 24 hours and less than 7 days after the first dose.

Discharge plan
Allow discharge with ponstan/gelusil/hematins/chlorhexidine
TCA KK in 6 weeks for postnatal review and contraception
TCA stat if fever / abdominal pain/ foul smelling PV discharge/
excessive PV bleeding
Encourage breastfeeding/perineum/ cord care at home
* GDM – TCA 6/52 KK for MGTT

__________________________
**LOWER SEGMENT CAESAREAN SECTION**

**PROCEDURE**

1. **PATIENT PUT IN SUPINE POSITION.**
2. **ABDOMEN CLEANED AND DRAPED.**
3. **PFANNESTIAL INCISION MADE AND ABDOMEN OPENED IN LAYERS**
4. **UV FOLD IDENTIFIED AND SEPARATED**
5. **BLADDER PUSHED AWAY CAUDALLY AND RETRACTED INFERIORLY WITH DOYAN’S RETRACTOR.**
6. **TRANSVERSE INCISION MADE AT LOWER SEGMENT OF UTERUS.**
7. **INCISION EXTENDED WITH BLUNT DISSECTION**
8. **AMNIOTOMY DONE AND BABY DELIVERED.**
9. **PLACENTA AND MEMBRANES DELIVERED VIA CCT.**
10. **UTERUS CLOSED IN 2 LAYERS WITH VICRYL 1-0**
11. **FALLOPIAN TUBES AND OVARIIES NORMAL**
12. **HAEMOSTASIS SECURED.**
13. **SWAB AND INSTRUMENT COUNTS WERE CORRECT.**
14. **RECTUS SHEATH WAS CLOSED WITH VICRYL 1.**
15. **SKIN WAS CLOSED VICRYL 2-0.**
16. **VAGINAL TOILET DONE AND BLOOD CLOTS EVACUATED.**

**POST OPERATIVE MANAGEMENT**

1. **TRANSFER OUT TO WARD ONCE PATIENT STABLE.**
2. **ALLOW ORALLY**
3. **LIE IN SUPINE POSITION FOR 6 HOURS (SPINAL)**
4. **BP/ PR MONITORING 1/4HOURLY UNTIL STABLE**
5. **CBD FOR ONE DAY**
6. **STRICT PAD CHARTING.**
7. **IVD 5 PINTS OF NSD5% / 24 H UNTIL PATIENT TAKING ORALLY WELL**
8. **CONTINUE ANALGESIA AS ORDERED BY ANESTHETIST. EG: SERVE SUP VOLTAREN 75MG BD. START FIRST DOSE 6 HOURS POST OP**
9. **SC HEPARIN 5000U BD TILL AMBULATING WELL**
10. **IV CEFOBID 1G BD + IV METRONIDAZOLE 500MG TDS X 24 HOURS**
11. **WI DAY 2.**
12. **STO NOT REQUIRED**
13. **MODE OF DELIVERY NEXT PREGNANCY: TOS/LSCS**
14. **FBC DAY 2**
15. **IV PITOCIN 40U FOR 6H**

**Post Caesarian-section review**

**Age/race**
Para 1, Post ELLSCS 2 hours for breech presentation

**ANC:** Breech presentation with oligohydromnios

**Intra operative findings:** from op notes

**Progress:**
Patient complains of minimal pain at the op site
Otherwise:
No dizziness/headache, No SOB/chest pain
No palpitations, No calf tenderness

Unable to move legs, sensations intact
Urine output: 400cc from the OT
Pad: 3/4 soaked since from the OT

**Clinical:**
alert and conscious, pink, hydration fair
not tachypneic, not tachycardic
vitals stable and afebrile

Lungs: clear with equal air entry bilaterally
**CVS:** DRNM

**PA:**
soft with minimal tenderness at the op site
uterus well contracted at 20 weeks
dressing minimally soaked

**Plan:** To continue post op plan

---

**Bishop Score**

<table>
<thead>
<tr>
<th>Character</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position of cervix</td>
<td>Posterior</td>
<td>Axial</td>
<td>Anterior</td>
</tr>
<tr>
<td>Dilatation of cervix</td>
<td>0cm</td>
<td>1cm</td>
<td>&gt;2cm</td>
</tr>
<tr>
<td>Length of cervix</td>
<td>2cm</td>
<td>1cm</td>
<td>&lt;0.5cm</td>
</tr>
<tr>
<td>Consistency of cervix</td>
<td>Firm</td>
<td>Soft</td>
<td>Soft and stretchable</td>
</tr>
<tr>
<td>Station of head</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
</tr>
</tbody>
</table>

> 6/10 = labour likely to progress
< 6/10 = for induction

1st Trimester 1-12
2nd Trimester 13-27
3rd Trimester 28-42

Term = 37- 40 weeks
Preterm = <37 weeks
Viable = 22weeks
EDD = 40wks
EDD + 9/7, post dates not allowed for GDM, PIH, PE

**AFI**
Normal 6-21,
<6 = Oligohydramnios
> 21 or single pocket 8cm = polyhydramnios
**TERBUTALINE SULFATE (BRICANYL) PROTOCOL**

<table>
<thead>
<tr>
<th>Time interval from onset of treatment (minute)</th>
<th>Terbutaline Dosage (ug/min)</th>
<th>Infusion syringe pump Dosage (ml/hr)</th>
<th>Dropmat Dosage (ml/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.5</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>40</td>
<td>7.5</td>
<td>9</td>
<td>90</td>
</tr>
<tr>
<td>60</td>
<td>10</td>
<td>12</td>
<td>120</td>
</tr>
<tr>
<td>80</td>
<td>12.5</td>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>100</td>
<td>15</td>
<td>18</td>
<td>180</td>
</tr>
<tr>
<td>120</td>
<td>17.5</td>
<td>21</td>
<td>210</td>
</tr>
<tr>
<td>160</td>
<td>20</td>
<td>24</td>
<td>240</td>
</tr>
</tbody>
</table>

- Infusion pump is preferred to avoid fluid overload
- Once contractions stop, maintain current titration for 1 hour, then reduce by 2.5ug every 20min to the lowest rate possible and continue for 12 hours.
- Maximum duration of infusion is 24 hours
- Then change to oral Terbutaline 5mg TDS to complete 48hrs of tocolysis.

**NIFEDIPINE (ADALAT) PROTOCOL**

<table>
<thead>
<tr>
<th>stat</th>
<th>30mins</th>
<th>60mins</th>
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</thead>
<tbody>
<tr>
<td>20mg</td>
<td>20mg</td>
<td>20mg</td>
</tr>
</tbody>
</table>

Maximum dose: 160mg / day

Contraction stop → 20mg 8 hours later then 8 hourly for 48hrs

**OXYTOCIN REGIME**

<table>
<thead>
<tr>
<th>Time after starting (minutes)</th>
<th>Oxytocin dose (mU / minute)</th>
<th>NORMAL CONCENTRATION REGIME</th>
<th>CONCENTRATED DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30 units of oxytocin in 500mls N/S</td>
<td>Concentration = 60mU/mls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using dropmat</td>
<td>Infusion rate (ml/hour) = 600mU/mls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using perfuser pump</td>
<td>Infusion rate (ml/hour)</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.1</td>
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<tr>
<td>30</td>
<td>2</td>
<td>2</td>
<td>0.2</td>
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<tr>
<td>90</td>
<td>8</td>
<td>8</td>
<td>0.8</td>
</tr>
<tr>
<td>120</td>
<td>12</td>
<td>12</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Limit for grand multiparous / previous scar

- Limit for grand multiparous / previous scar
  - 150: 16 ml/hour
  - 180: 20 ml/hour
  - 16: 16 ml/hour
  - 20: 16 ml/hour

- Limit for grand multiparous / previous scar
  - 210: 24 ml/hour
  - 240: 28 ml/hour
  - 270: 32 ml/hour

**ANTI HPT**

**LABETOLOL REGIME**

<table>
<thead>
<tr>
<th>Time interval from onset (minutes)</th>
<th>Dose (mg)</th>
<th>Time interval from onset (minutes)</th>
<th>Dose (mg)</th>
<th>Infusion rate (mls/ hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>0</td>
<td>20</td>
<td>5</td>
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<tr>
<td>30</td>
<td>80</td>
<td>90</td>
<td>90</td>
<td>40</td>
</tr>
<tr>
<td>Maximum</td>
<td>220</td>
<td>Maximum</td>
<td>160</td>
<td>40</td>
</tr>
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</table>

**HYDRAZINE REGIME**

<table>
<thead>
<tr>
<th>Time interval from onset (minutes)</th>
<th>Dose (mg)</th>
<th>Time interval from onset (minutes)</th>
<th>Dose (mg)</th>
<th>Infusion rate (mls/ hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
<td>20</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>40</td>
<td>5</td>
<td>40</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Maximum</td>
<td>15</td>
<td>Maximum</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

**MAGNESIUM SULPHATE THERAPY**

**INTRAVENOUS ROUTE**

<table>
<thead>
<tr>
<th>Loading Dose</th>
<th>Maintenance Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage</td>
<td>4 grams (8mls) MgSO₄</td>
</tr>
<tr>
<td>Preparation</td>
<td>10 gram (20mls) in 30 mls</td>
</tr>
<tr>
<td>Administration</td>
<td>4 gram (8mls) in 12 mls N/S → 20 mls</td>
</tr>
<tr>
<td>If convulsion persists</td>
<td>Over 10-15 minutes</td>
</tr>
<tr>
<td>2 gm (4mls) in 6 mls N/S over 15 minutes</td>
<td></td>
</tr>
<tr>
<td>Using perfuser pump</td>
<td>infuse at 5 mls/ hour</td>
</tr>
</tbody>
</table>

**INTRAMUSCULAR ROUTE**

<table>
<thead>
<tr>
<th>Loading Dose</th>
<th>Maintenance Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage</td>
<td>10 grams (20mls) MgSO₄</td>
</tr>
<tr>
<td>Administration</td>
<td>5 grams into the upper outer quadrant of each buttock</td>
</tr>
</tbody>
</table>

1 Amp MgSO₄ = 2.75g | 1 Amp 10 % Calcium Gluconate

Tox: hyporeflexia, serum Mg↑, renal: urine output <30cc/hr, Resp <12/min

***Antidote = 1 amp 10 % Calcium Gluconate***