Dr John Short

Obstetrician & Gynaecologist

Christchurch

Early Pregnancy Issues - Concurrent Breakout session repeated

Friday, 29 July 2011	Start 2:00pm	Duration: 60mins	Heritage Room
	Start 4:00pm	Duration: 60mins	Heritage Room



Early Pregnancy

John Short
Obstetrician and Gynaecologist
Christchurch

First Trimester Problems

- Vaginal Bleeding
- Lower Abdominal Pain
- Vomiting

Vaginal Bleeding

- ABC…
- Concurrent assessment and resuscitation
- Stop bleeding as necessary

History

- Date of / time since LMP and any preg. Test

- Quantity
- Duration
- Character, eg clots, tissue, lumpy bits
- Associated symptoms, eg Pain, feinting
- Details of current pregancy
- Atypical symptoms, eg Diarrhoea, vomitting

History

- Obstetric History
- Gynae History (including contraceptive and sexual health)
- Medical and Surgical Histories
- Medication and Allergies

Examination

- Observations- temp, pulse, BP
- Abdomen- tenderness, masses
- Vagina- assess bleeding
  uterine size
  tenderness
  cervix- open or closed

Provisional Diagnosis

- Threatened miscarriage
- Inevitable miscarriage
- Complete miscarriage
- Incomplete miscarriage
- Ectopic Pregnancy

Lower Abdominal Pain

- ABC…
- Concurrent assessment and resuscitation
- Emergency intervention as necessary

History

- Date of / time since LMP and any preg. Test

- Location
- Duration
- Character
- Severity
- Radiation
- Exacerbating/relieving factors
- Assoc symptoms, eg bleeding, feinting
- Atypical symptoms, eg diarrhoea, vomitting

History

- Obstetric History
- Gynae History (including contraceptive and sexual health)
- Medical and Surgical Histories
- Medication and Allergies

Examination

- Observations- temp, pulse, BP
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- Vagina- assess bleeding
  uterine size
  tenderness
  cervix- open or closed

Provisional Diagnosis

- Ectopic Pregnancy
- miscarriage
- Consider “non pregnancy specific” cause

Investigations

- Urine Pregnancy test
- Bloods- full blood count, group and hold

Problems

- Clinical indicators are very non-specific, except in extreme cases, eg ruptured ectopic, hypovolaemia
- Therefore risk of reliance on investigations
- ACT ON CLINICAL IMPRESSION

Investigations

- Ultrasound
- HCG

Ultrasound

- Single most useful investigation in early pregnancy

- location
- viability
- number
- gestation
- prognosis

pregnancy location

- inside the uterus
- outside the uterus
- cannot tell
- (may depend on gestation)

pregnancy viability

- viable
- non viable
- cannot tell
- (may depend on gestation)

Intrauterine pregnancy

- Viable
- Non viable
- Molar

Prognostic features

- Large haematoma
- Slow FH
- Small gestation sac : fetus ratio

- What do we do?

Molar pregnancy

- Complete or partial

- USS good for complete mole
- USS bad for partial mole

Scan findings

- Viable intrauterine pregnancy
- Non viable intrauterine pregnancy
- Intrauterine pregnancy uncertain viability
- Extrauterine pregnancy
- Pregnancy of unknown location

- Molar pregnancy

Viable intrauterine pregnancy

Viable intrauterine pregnancy

- Fetal pole with fetal heart activity seen

- consider “non pregnancy specific” cause for symptoms

Non viable intrauterine pregnancy

Non viable intrauterine pregnancy

- Fetal pole > 5mm, no fetal heart
- Terms include “missed miscarriage”, “delayed miscarriage”
- Gestation sac > 18mm, no fetal pole
- Terms include “blighted ovum”, “anembryonic pregnancy”

Non viable intrauterine pregnancy

- Management options-

  -Medical

  -surgical

  -expectant

(same options for “incomplete miscarriage”)

Intrauterine pregnancy uncertain viability

Intrauterine pregnancy uncertain viability

- Fetal pole < 5mm with no FH
- Gestation sac < 18mm with no fetal pole
- Management: rpt scan in 7-14 days
- No change = failed intrauterine pregnancy

Extrauterine pregnancy

Extrauterine pregnancy

- Or ectopic pregancy
- Mostly in fallopian tube, can be elsewhere
- Can be seen ultrasonically, with or without fetal heart activity

ectopic pregnancy

An empty endometrial cavity with:

(i) an inhomogeneous adnexal mass or

(ii) an empty extrauterine gestational sac seen as hyper-echoic ring or

(iii) an extrauterine gestational sac with a yolk sac and/or fetal pole with or without cardiac activity

(Condous et al., 2005a)

- Ectopic Pregnancy diagnosable from FIRST ultrasound in 80% of cases
- HCG level does NOT significantly alter this
- Gestation does NOT significantly alter this

Scan vs HCG

	EP visualized (on first scan)	EP not visualized (on first scan)	sensitivity
n	72	18	80%
hcg<250	9	3	75
Hcg<500	15	6	71.4
Hcg<1000	28	10	73.7
Hcg<3000	45	14	76.3
Hcg<5000	59	16	78.67

Scan vs reported gestation

Gestation (days from LMP)	EP	PUL	sensitivity
<27	17	4	81%
28-34	8	0	100%
35-41	16	3	84.2%
42-48	23	6	79%
49-55	21	7	75%
>56	13	3	81%

TOP TIP

- If an ectopic is suspected either act clinically or
- Arrange an ultrasound scan regardless of reported gestation and HCG level

Extrauterine pregnancy

- Management options-

  -Medical

  -Surgical

  -(expectant)

Pregnancy of unknown location

Pregnancy of unknown location

An empty endometrial cavity, with no evidence of an intrauterine gestational sac or retained products of conception and no extra-uterine pregnancy visualized

(Royal College of Obstetricians and Gynaecologists, 2006)

Pregnancy of unknown location

- No evidence of pregnancy seen on scan

- Possible diagnoses include-
  -early intrauterine pregnancy
  -complete / incomplete miscarriage
  -extrauterine pregnancy

interpretation

- Report of PUL potentially wrong in 25% of cases
- Report of ectopic mass very reliable

interpretation

- The person doing the report is important
- Don’t be shy about asking for a second opinion

Pregnancy of unknown location

- History and examination can be helpful
- Blood tests can be helpful, eg HCG
- Other scan features are helpful

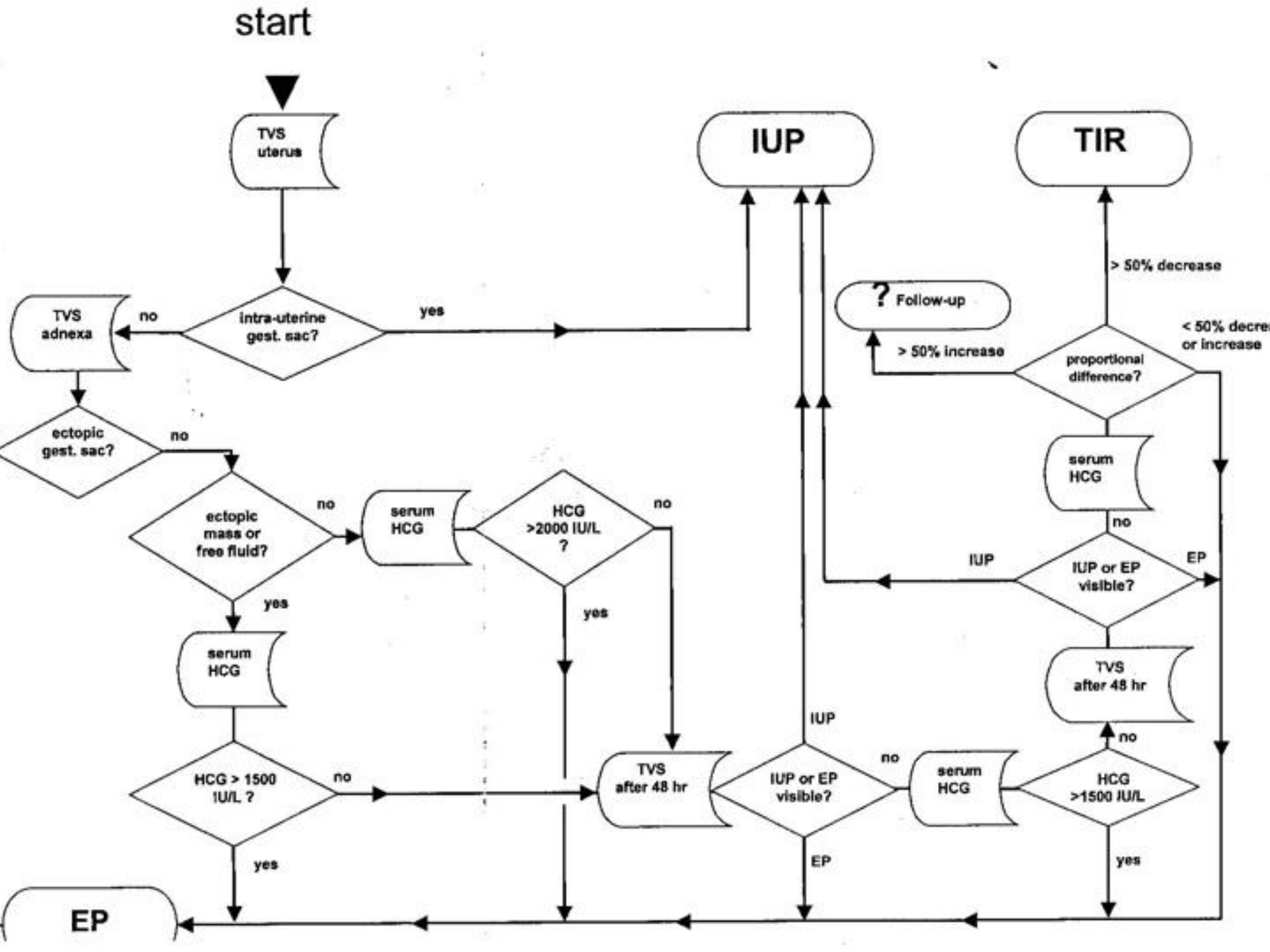
Eg: RPOC
free pelvic fluid

HCG discriminatory zone

- Level above which one would expect to see evidence of IUP on TVUS
- Depends on quality of ultrasound and person performing and/or reporting ultrasound
- Varies 1000-2400

Serial HCG

- Potentially more helpful
- Caution required interpreting rises/falls
- Watch the patient as well as the blood test


start
TVS uterus
IUP
TIR
intra-uterine gest. sac?
yes
no
TVS adnexa
ectopic gest. sac?
no
ectopic mass or free fluid?
no
yes
serum HCG
HCG >2000 IU/L ?
no
yes
serum HCG
HCG > 1500 IU/L ?
no
yes
EP
TVS after 48 hr
IUP or EP visible?
IUP
EP
no
serum HCG
HCG >1500 IU/L
yes
no
TVS after 48 hr
IUP or EP visible?
IUP
EP
no
serum HCG
proportional difference?
> 50% increase
? Follow-up
> 50% decrease
< 50% decre
or increase

RPOC

- Traditionally associated with risk of bleeding and/or DIC if untreated

Management

- Medical
- Surgical
- conservative

Decision making

- Clinical risk assessment
- Patient preference
- Ultrasound risk assessment

USS findings

- Based on ‘endometrial thickness’
- <20mm no treatment required
- >30mm treatment required
- 20-30mm opinion/evidence varies

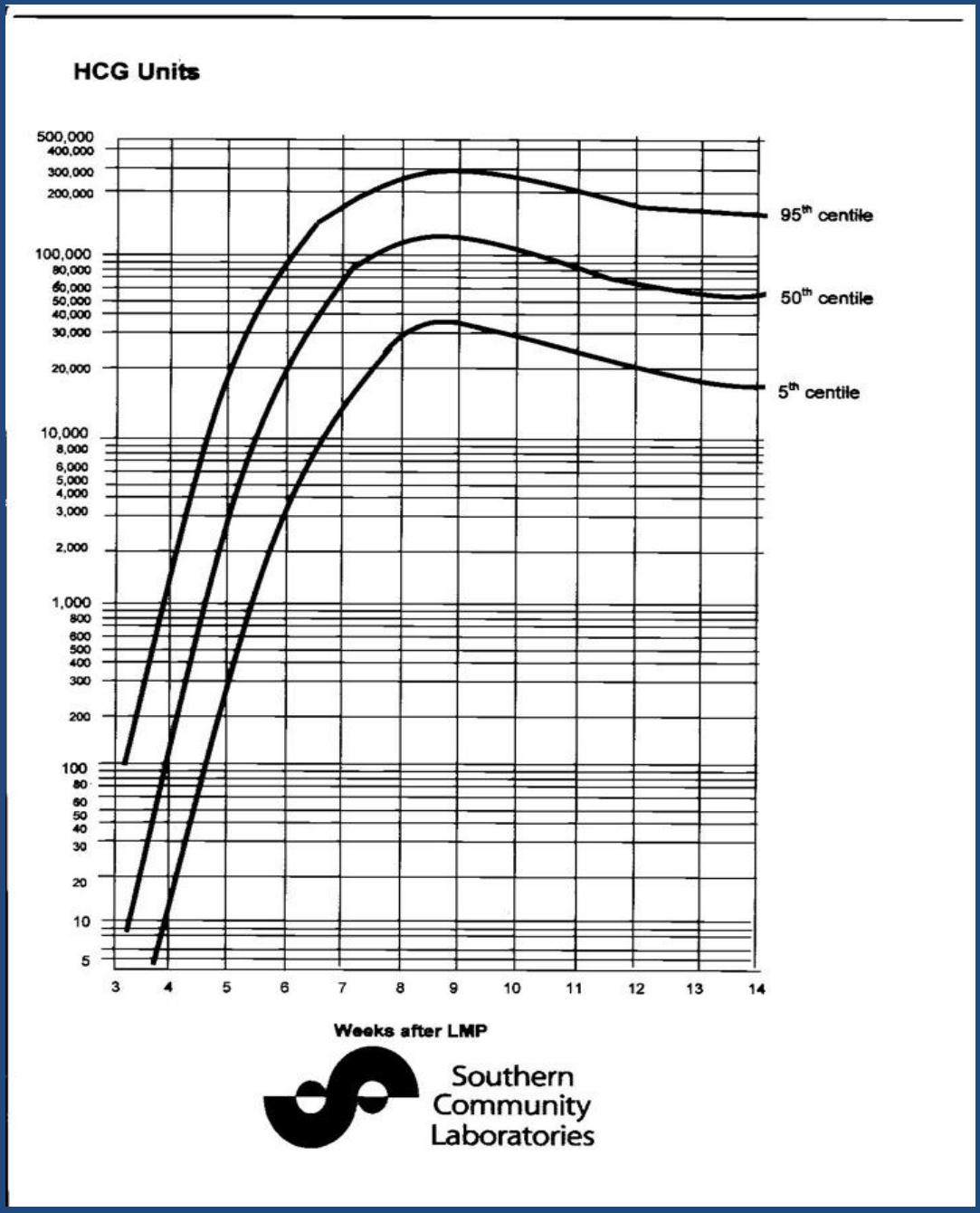
20-30mm

- Consider other factors
- Eg location, symptoms

Serum quantitative HCG

- Can be helpful in the diagnosis of women with suspected ectopic pregnancy who have minimal or no symptoms and are clinically stable…

- …and in whom ultrasound is inconclusive


HCG Units
500,000
400,000
300,000
200,000
100,000
80,000
60,000
50,000
40,000
30,000
20,000
10,000
8,000
6,000
5,000
4,000
3,000
2,000
1,000
800
600
500
400
300
200
100
80
60
50
40
30
20
10
5
3
4
5
6
7
8
9
10
11
12
13
14
95th centile
50th centile
5th centile
Weeks after LMP
Southern
Community
Laboratories

56

Serum quantitative HCG

- > 1500 should see evidence of intrauterine pregnancy
- In most normal pregnancies increases by 66-100% every 48 hrs
- Falls in non viable pregnancies, more quickly if miscarried

Serum quantitative HCG

- If >1500 and history not strongly suggestive of miscarriage seriously consider diagnosis of ectopic pregnancy and manage accordingly

- Otherwise monitor serial levels

Serum quantitative HCG

- If rising normally, then it is likely to represent a viable intrauterine pregnancy
- Rescan after 1 week
- (consider “flourishing ectopic”)

Serum quantitative HCG

- If falling rapidly, then it is likely to represent a miscarriage

- Check HCG pregnancy test 1-2 weeks

Serum quantitative HCG

- If rising or falling slowly consider ectopic pregnancy

- Consider further surveillance, repeat scan or intervention depending on individual situation

Pitfalls

- HCG can double in ectopic pregnancies
- HCG can rise slowly in normal pregnancies
- It doesn’t tell you where the pregnancy is
- Takes time

Anti D

- Should be given to all rhesus negative women with first trimester bleeding, surgical evacuation or ectopic pregnancy.