Standardisation of multidisciplinary obstetric emergency training nationally.
Early Pregnancy Vaginal Bleeding

Michael Gannon
MRH Mullingar

• Guideline No. 1 Ultrasound diagnosis of early pregnancy miscarriage Dr Peter McParland
• Guideline No. 10 Management of early pregnancy miscarriage Dr Nadine Farah
• Guideline No. X The diagnosis and management of ectopic pregnancy Dr Michael Gannon
Early pregnancy development
# Early pregnancy development

<table>
<thead>
<tr>
<th>week</th>
<th>stage</th>
<th>transvaginal ultrasound</th>
<th>MSD</th>
<th>CRL</th>
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<td>yolk sac</td>
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<td>8</td>
<td>I</td>
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<tr>
<td>9</td>
<td>I</td>
<td></td>
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<tr>
<td>10</td>
<td>fetus</td>
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- **Miscarriage**
- **Scan**
Addendum to GTG No 25 (Oct 2006): The Management of Early Pregnancy Loss

Recent research suggests that given inter-observer variability in ultrasound measurements and the greater variation in early embryonic growth than has hitherto been assumed, a more conservative approach to the diagnosis of early pregnancy loss is warranted.

The studies from Imperial College London, Queen Mary, University of London and the Katholieke Universiteit Leuven, Belgium published in the November 2011 issue of Ultrasound in Obstetrics and Gynaecology concluded that current definitions used to diagnose miscarriage could lead to an incorrect diagnosis and they call for clearer evidence-based guidance on detecting miscarriage through ultrasound scans.

Having carefully considered these papers, we recommend adoption of the following interim guidance with immediate effect:

1. Ultrasound diagnosis of miscarriage should only be considered with a mean gestation sac diameter $\geq 25\text{mm}$ (with no obvious yolk sac), or with a fetal pole with crown rump length $\geq 7\text{mm}$ (the latter without evidence of fetal heart activity)

2. A transvaginal ultrasound scan should be performed in all cases

3. Where there is any doubt about the diagnosis and/or a woman requests a repeat scan, this should be performed at an interval of at least one week from the initial scan before medical or surgical measures are undertaken for uterine evacuation. No growth in gestation sac size or CRL is strongly suggestive of a non-viable pregnancy in the absence of embryonic structures.
Ectopic pregnancy and miscarriage: Diagnosis and initial management in early pregnancy of ectopic pregnancy and miscarriage

December 2012

NICE Clinical Guideline
NICE - diagnosis

- Support and information giving
- EPU (7 days) self ref for recurrent miscarriage, previous ectopic or molar
- Symptoms and signs of EP and initial assessment
  - Pain and/or >6 wks: EPU
  - Painless bleeding <6 wks: expectant
- TVS
- hCG (not progesterone) in women with PUL
NICE - management

- Expectant management for 7-14 days first line strategy for miscarriage
- Medical if expectant not acceptable
- Surgical choice of vacuum aspiration under LA or surgery in theatre under GA
- Laparoscopy for EP
- Salpingectomy unless infertility
Early Pregnancy Unit

- All maternity units have a dedicated EPU
- Direct access for GPs and selected patient groups
- Trained sonographer with TV scanning
- Senior obstetrician available during each session
- Written information provided
- Monitored by HSE Clinical Care Programme
Early diagnosis of miscarriage

- CRL $>$ 7mm with no heart activity on TVS
- MSD $>$ 20mm with no yolk sac or embryo on TVS
  - Guideline No. 1 (2010)

- CRL $\geq$ 7mm with no heart activity on TVS
- MSD $\geq$ 25mm with no yolk sac or embryo on TVS
  - Guideline No. 10 (2012)
Should we consider a second scan?

- Doubt about diagnosis
  - First scan before 8 weeks
  - Unskilled / out-of-hours / TA scan / obese
  - Long cycle, asymptomatic woman
    - Guideline No. 10 (2012)

- Woman’s request if unconvinced or not ready for diagnosis

NICE guideline (2012):
Second scan 1 week if CRL <7mm
Second opinion and/or scan 1 week if CRL ≥7mm
Management

Miscarriage

- Cond stable
  - Incomplete miscarriage
    - Conservative
      - Return p.r.n.
      - Scan follow-up

- Cond stable
  - Missed miscarriage
    - Medical
      - Misoprostol 600mcg p.o. or p.v. 3 hrly x 2

- Heavy bleeding
  - Missed miscarriage
    - Surgical
      - Suction curettage as day case
hCG and progesterone at every visit
(as used at Mullingar)

- Immediate indication of viability
- Confirms scan findings
- Confirmation of complete miscarriage (vs ectopic)
- No restriction on early attendance
- Outpatient management of suspected ectopic

Batching of bloods easier for laboratory
Ectopic Pregnancy

- Women in A&E should have urinary pregnancy test
- TVS in EPU best for diagnosis
- Beware of discriminatory zone
- Expectant management good for small mass and falling hCG
- Medical (methotrexate) for mass <35mm and hCG <1500IU/L
- Laparoscopic salpingotomy OR salpingectomy
Resources

- Emergency room assessment - dedicated Obgyn facility
- Review EPU setup & staffing particularly nursing
- Time for a second national round of scan machines
Communication

• Set up a national association of EPU’s
• 19 EPU’s in Ireland
• Over 200 EPU’s in UK
<table>
<thead>
<tr>
<th>Early Pregnancy Units in Ireland</th>
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<tbody>
<tr>
<td><strong>Altnagelvin Area Hospital</strong></td>
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<tr>
<td>Glenavon Road, Londonderry, Ireland</td>
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<tr>
<td>Clinic Times: Mon-Fri 14:00-16:30</td>
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<tr>
<td>Referral: GPs, midwives</td>
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<tr>
<td>Tel: (028) 716158</td>
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<tr>
<td><strong>Letterkenny General Hospital</strong></td>
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<tr>
<td>Letterkenny, County Donegal, Republic of Ireland</td>
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<td>Clinic Times: Mon-Fri 11:00-14:00</td>
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<td>Referral: GPs, midwives, occasional self referral</td>
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<tr>
<td>Tel: 074 9123566</td>
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<tr>
<td><strong>Royal Jubilee Maternity Hospital</strong></td>
</tr>
<tr>
<td>Grosvenor Road, Belfast</td>
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<tr>
<td>BT12 6BA</td>
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<tr>
<td>Clinic Times: Mon-Wed 08:45-12:45</td>
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<tr>
<td>Referral: GP / Midwife / Admission unit / self</td>
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<tr>
<td>Tel: (028) 90632303, Fax: (028) 90633151</td>
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<tr>
<td><strong>Ulster Hospital</strong></td>
</tr>
<tr>
<td>Maury Ward, Upper Newtownards Road, Dundonald, Belfast</td>
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<tr>
<td>BT16 1RH</td>
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<td>Referral: Health professionals</td>
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Quality standards and improvement

- Clinical research through EPU network
- Place of hCG & progesterone in diagnosis
- Promote conservative management of miscarriage
- Availability of same day surgery
- Explore option of ERPC (SMM) under LA
Looking forward

EPU vs A&E
Hospital admission
Delayed scanning

Staff & resources