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Norfolk and Norwich University Hospitals NHS Foundation Trust

Early Pregnancy Assessment Unit (EPAU) Medical Guidelines

A Clinical Guideline

For Use in:	EPAU
By:	EPAU doctors and nurses
For:	Ultrasound Diagnosis and management of early pregnancy bleeding and pain up to 16 weeks gestation
Division responsible for document:	Women / Children
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This is a Controlled Document

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History

The Early Pregnancy Assessment Unit (EPAU) nurse will take patient history and fill in as prompted through drop down box items on ASTRAIA.

Blood group and anti D prophylaxis

Current guidelines recommend that anti D is only required if there is surgical intervention in intrauterine pregnancy (surgical evacuation) or surgical management of ectopic pregnancy up to 13 weeks gestation in nonsensitised Rh negative women. In contrast, it will be required in all miscarriages of more than 13 week gestation in nonsensitised Rh negative women.

The gestation age of pregnancy should be determined by ultrasound scan and not by last menstrual period (LMP).

Using Ultrasound for diagnosis

A) Up to 13 weeks gestation

1. Offer women who attend EPAU service a transvaginal ultrasound scan to identify the location of the pregnancy and whether there is a fetal pole and heartbeat.
2. Consider a transabdominal ultrasound scan for women with an enlarged uterus or other pelvic pathology, such as fibroids or an ovarian cyst.
3. If a transvaginal ultrasound scan is unacceptable to the woman, offer a transabdominal ultrasound scan and explain the limitations of this method of scanning.
4. Inform women that the diagnosis of miscarriage using 1 ultrasound scan cannot be guaranteed to be 100% accurate and there is a small chance that the diagnosis may be incorrect, particularly at very early gestational ages.
5. When performing an ultrasound scan to determine the viability of an intrauterine pregnancy, first look to identify a fetal heartbeat. If there is no visible heartbeat but there is a visible fetal pole, measure the crown–rump length (CRL). Identify the yolk sac if fetal pole is not visible. Measure the mean gestational sac diameter if there is no visible fetal pole (i.e. if the sac is empty or contains a yolk sac).
6. If the crown–rump length is less than 7.0 mm with a transvaginal ultrasound scan and there is no visible heartbeat, perform a second scan a minimum of 7 days after the first before making a diagnosis. Further scans may be needed before a diagnosis can be made.
7. If the crown–rump length is 7.0 mm or more with a transvaginal ultrasound scan and there is no visible heartbeat: seek a second opinion on the viability of the pregnancy **and/or** perform a second scan at the next available slot in the EPAU before making a diagnosis.
8. If there is no visible heartbeat when the crown–rump length is measured using a transabdominal ultrasound scan: record the size of the crown–rump length

and perform a second scan a minimum of 14 days after the first before making a diagnosis.

9. If the mean gestational sac diameter is less than 25.0 mm with a transvaginal ultrasound scan and there is no visible fetal pole, perform a second scan a minimum of 14 days after the first before making a diagnosis. Further scans may be needed before a diagnosis can be made.
10. If the mean gestational sac diameter is 25.0 mm or more using a transvaginal ultrasound scan and there is no visible fetal pole and no yolk sac: seek a second opinion on the viability of the pregnancy **and/or** perform a second scan at the next available slot in the EPAU before making a diagnosis.
11. If there is no visible fetal pole and the mean gestational sac diameter is measured using a transabdominal ultrasound scan: record the size of the mean gestational sac diameter **and** perform a second scan a minimum of 14 days after the first before making a diagnosis.
12. Do not use gestational age from the last menstrual period alone to determine whether a fetal heartbeat should be visible.
13. Inform women that the date of their last menstrual period may not give an accurate representation of gestational age because of variability in the menstrual cycle.
14. Inform women what to expect while waiting for a repeat scan and that waiting for a repeat scan has no detrimental effects on the outcome of the pregnancy.
15. All ultrasound scans in first trimester should be performed and reviewed by someone with training in, and experience of, diagnosing ectopic pregnancies.
16. If there is no gestation sac, endometrial thickness should be measured.
17. Extra-uterine observations

The appearance of the ovaries, the presence of an ovarian cyst or any other adnexal masses or fluid in the Pouch of Douglas, especially if no sign of intra-uterine pregnancy should be recorded.

B) Between 13+1 to 16 weeks gestation)

Women should be offered transabdominal ultrasound scan.

Diagnosis and management (brief outline)

Viable pregnancy

Refer to GP to arrange antenatal care.

Commence intervention if urgently required before ANC appointment at dating scan (eg aspirin + heparin for Antiphospholipid antibody syndrome) and inform GP.
Refer for consultant ANC appointment if urgent opinion required (e.g. email diabetic specialist midwife on DSM if patient is diabetic).

A booking form from the community is also necessary for these patients.
If woman wishes termination of pregnancy (TOP), she should be given contact details of BPAS TOP service.

Non-viable intrauterine pregnancy (missed miscarriage)

- If the mean (of three measurements) sac diameter is >/= 25mm, with no evidence of a fetal pole or yolk sac this is diagnostic of a missed miscarriage.
- If the fetal pole has a CRL >/= 7mm with no evidence of heart pulsation, this is diagnostic of a missed miscarriage.
- Aim to perform transvaginal ultrasound scan (TVS) in all cases. If unable to perform TVS refer to transabdominal scan (TAS) protocol on page 3.

The options of expectant, medical and surgical management should be offered. (See Guideline G18).

Surgical management option is available only up to 12 weeks gestation. Ideally all women requesting a surgical evacuation should be given a date within 48 hours of the decision. Check FBC and Group and save. If bleeding heavily arrange surgical evacuation as an emergency in-patient. Women with miscarriage beyond 12 weeks gestation should be offered medical management only.

Intrauterine pregnancy of uncertain viability

A pregnancy is considered to be of uncertain viability in the following circumstances

- If the mean sac diameter is <25 mm, with no evidence of a fetal pole.
- If the fetal pole has a CRL of < 7mm with no evidence of heart pulsation.

A repeat scan should be performed at a minimum interval of 7 days from the initial scan if fetal pole is visible and at a minimum interval of 14 days from the initial scan if fetal pole is not visible before making a diagnosis. If the repeat scan shows no growth in gestation sac size in the absence of embryonic structures or no evidence of heart pulsation with no growth of CRL, then we should diagnose it as a non-viable pregnancy (missed miscarriage). Further scans may be needed before a diagnosis can be made.

Incomplete miscarriage

Evidence of retained products of conception on ultrasound scan would indicate incomplete miscarriage. Discuss with patient the options of expectant, medical or surgical evacuation. If the patient is bleeding heavily, arrange surgical evacuation as an emergency in-patient. Check FBC and Group and save. (See Guideline G18)

Complete miscarriage

Complete miscarriage can be diagnosed in the following circumstances

- When the uterus is empty and the urine pregnancy test is negative.
- If an intrauterine pregnancy was seen previously on scan and the uterus is now empty.

If intrauterine gestation was not established by a previous scan and the uterus is empty with a positive pregnancy test, then ectopic pregnancy needs to be excluded.

These cases must be managed according to the pregnancy of unknown location algorithm (see Guideline G3).

Ectopic pregnancy

See Guidelines G3 (Diagnosis and management of ectopic pregnancy) and G27 (Management of ectopic pregnancy with Methotrexate).

History of Recurrent miscarriage

Consider follow up scan in the EPAU after 2 to 3 weeks if ultrasound confirms a viable intrauterine pregnancy. Refer to GP to arrange antenatal care. (See guideline G11).

Documentation

History, ultrasound findings and management plan should be recorded in the ASTRAIA database. 3 copies of the summary should be printed – 1 copy to be sent to the GP, 1 copy to be filed in the hospital notes and 1 copy should be handed over to the patient.

References:

1) RCOG Guidance on ultrasound procedures in early pregnancy. RCOG Press, 1995.
2) The management of early pregnancy loss. RCOG Green Top Guideline no.25. October 2006.
3) Association of early pregnancy units (AEPU) guidelines 2007.
4) Addendum to RCOG GTG no.25 by RCOG Ultrasound Advisory Group (Oct 2011).
5) NICE Clinical Guideline 126 ‘Ectopic Pregnancy and Miscarriage: diagnosis and initial management.’ April 2019. Last updated 24 November 2021