ABNORMALITIES OF EARLY PREGNANCY

EARLY PREGNANCY COMPLICATIONS — ASSESSMENT AND DIAGNOSIS

AIMS

- To obtain information that will enable an accurate diagnosis of the woman’s presenting complaint in a timely manner.
- To initiate treatment where necessary.
- To provide the woman with support, a full explanation of the condition and the proposed treatment (including alternatives, likely effects and expected outcome/s).
- To make appropriate referrals for further care where necessary.

BACKGROUND

Miscarriage and ectopic pregnancy can cause significant maternal morbidity and mortality\(^1\)\(^{-4}\). Miscarriage occurs in at least 10-20% of pregnancies. The risk of miscarriage is reduced to 3% once a viable embryo is visualised\(^7\). Vaginal bleeding that does not lead to miscarriage has been linked to pre-term birth, stillbirth and low birth weight\(^1\)\(^{-2}\)\(^\). Ectopic pregnancy, the most dangerous cause of vaginal bleeding\(^1\); is increasing in incidence due to earlier diagnosis along with an increased use of assisted conception\(^3\). Incidence rates for ectopic pregnancy are between 1 in 200-500 pregnancies\(^4\). Gestational trophoblastic disease or molar pregnancy is rare occurring between 1 in 1000 pregnancies but is important to consider in assessment\(^5\). Support, follow up and access to counselling is an important part of care for women who experience pregnancy loss. Follow up should be offered to all women after pregnancy loss.\(^5\)

KEY POINTS

1. Women commonly present at the Emergency Centre (EC) with a history of amenorrhoea, abnormal vaginal bleeding and/or abdominal pain in the first trimester of pregnancy. Management of these cases begins with a thorough history, clinical examination, followed by appropriate investigations and treatment.
2. **Always consider the possibility of ectopic pregnancy** in a sexually active woman with vaginal bleeding, +/- abdominal pain and positive pregnancy test\(^7\).
ASSESSMENT

PROCEDURE

Assess the woman’s general condition

Record vital signs, including weight if situation allows.

Review regularly

Commence resuscitation if clinical signs of hemodynamic instability

Call code blue

Complete medical, surgical, obstetric, psychosocial and family history

ADDITIONAL INFORMATION

RATIONALE

Prompt assessment is essential to identify women who are haemodynamically unstable. Symptoms such as unexplained shock, signs of syncope, shoulder pain and tenesmus may suggest a rupture requiring emergency treatment. Septicaemia can occur when products from miscarriage have been retained and requires prompt management. Vital signs provide a baseline measurement and enables monitoring of adverse events.

Recording of weight can assist with calculation of drug doses that are dependent on body weight. This ensures optimal efficiency of medication and avoidance of toxic reactions from an excessive dose.

RATIONALE

To identify high risk factors for ectopic pregnancy or other conditions which may require further investigation, observation or intervention. Vaginal bleeding can be associated with a complication of early pregnancy or other cause. Risk factors for ectopic pregnancy include: multiple sexual partners, early age of sexual intercourse and/or the presence of IUD and assisted conception. Includes previous sterilisation – or reversal of sterilisation and should be considered in assessment.

RATIONALE

Consider the following:

OBSTETRIC AND GYNAECOLOGY HISTORY

- Number of pregnancies (gravida) - including live births, miscarriages and terminations, details of gestation and treatment
- Nature of previous births
- History of previous ectopic pregnancy
- Recent dilation and curettage
- History of previous PAP smear
- Previous infertility
- Previous pelvic inflammatory disease
- Infection
- Surgical history
- Smoking?
- Diethylstilboestrol exposure in utero
- History of vaginal douching

PAIN

- Location, radiation and nature
- Constant or intermittent
- Provoking or relieving factors
- Presence of shoulder tip pain

VAGINAL BLEEDING

- Onset and nature of bleeding
- Last menstrual period:
  - duration,
  - nature (heavy/spotting)
  - passage of tissue or products of conception

REPRODUCTIVE HISTORY

- Sexually active
- Contraception use currently
- History of recent assisted contraception
- If possibility of pregnancy: Investigations performed, presence of symptoms of pregnancy
INVESTIGATIONS

Following the assessment, and history

Suspected Pregnancy

- Obtain Intravenous Access with 14 gauge cannula
- Commence intravenous therapy if required
- Perform urine βHCG.

Consider the following blood tests:
- βHCG (if uncertain dates or <7 weeks)
- Serial βHCG may be required
- FBC, Cross Match Coagulation, U& E (if significant bleeding is present)
- Check Rhesus D antigen status if a negative blood group
- and antibodies
- Consider history taken and screening required for blood borne and infectious disease e.g. MRSA, Hepatitis B & C, HIV, Chlamydia.
- Serum progesterone levels with ultrasound may assist when pregnancy is of unknown location

Transvaginal Ultrasound

RATIONALE

All women of reproductive age with signs of abdominal pain or vaginal bleeding should have a pregnancy test.

A single serum βHCG indicates when an intrauterine pregnancy should be visualised.

Serial βHCG is useful in the diagnosis of an asymptomatic ectopic pregnancy, or to assess viability of pregnancy.

A serum progesterone level of <25nmol/l in conjunction with a pregnancy of unknown location are confirmed to be non-viable.

All women requiring surgical uterine evacuation should be screened for Chlamydia trachomatis; as this places the women at an increased risk for pelvic inflammatory disease.

RATIONALE

Transvaginal sonography has been found to be the best single diagnostic modality for diagnosing ectopic pregnancy. This should be performed in all cases where early pregnancy complications are being investigated. Sensitivity to diagnosing ectopic pregnancy has been found to be 90.9-99.9%.

Determine the presence of a live intrauterine pregnancy by ultrasound. When diagnosing an ectopic pregnancy be aware: An empty intrauterine sac may be a pseudo sac in a woman with an ectopic pregnancy.

An ectopic pregnancy may co-exist with an intra-uterine pregnancy.
EXAMINATION

Assess with a physical, general and gynecological examination

Abdominal examination
Perform an abdominal examination:
Assess for:
- tenderness, abdominal masses
- masses arising from the pelvis
- height of fundus

RATIONALE
Assess fundal height: at 12 weeks the uterine fundus is just palpable abdominally, at 24 weeks the uterine fundus is usually at the umbilicus.

Vaginal Examination
Pass a bivalve speculum and perform a vaginal examination. Assess:
- presence of cervical excitation
- cervical internal os dilatation
- congruence of uterine size and equivalent to dates
- tenderness of uterus
- adnexal for masses and/or tenderness.

RATIONALE
Passage of fetal tissue, cramping abdominal pain and a dilated cervix is suggests a threatened or missed miscarriage.

If a woman becomes bradycardic and hypotensive during presentation; a vaginal examination is indicated. Any retained products of conception should be sent to histopathology.

FOLLOWING ASSESSMENT:

If early pregnancy bleeding or pain:
Refer to the following Clinical Guidelines
- Early Pregnancy Bleeding Algorithm
- Vaginal Bleeding and a Viable Intrauterine Pregnancy

If ectopic pregnancy suspected or diagnosed:
Refer to the following Clinical Guidelines
- Medical Management using Methotrexate
- Surgical Management of Ectopic Pregnancy
- Expectant Management of Ectopic Pregnancy
REFERENCES