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Managing early pregnancy bleeding

Bleeding in early pregnancy is very common. Considerations for the assessing doctor most commonly include implantation bleed, miscarriage (threatened, missed, incomplete, complete), ectopic pregnancy, molar pregnancy and local causes (e.g. cervical polyps, vaginitis, ectropion, trauma, warts, cancer). Appropriate medical management is important, as is grief counselling because 1 in 5-6 (15 – 20%) pregnancies miscarry.

The exact cause of first trimester uterine bleeding often cannot be determined, so the goal of evaluation, if a definitive diagnosis is not possible, is to rule out serious pathology like ectopic pregnancy.

History

First determine the extent of bleeding and/or pain. Time since the last normal menses estimates gestational age. Risk factors for ectopic pregnancy are important (e.g. previous ectopic, pelvic inflammatory disease, adnexal surgery, subfertility, IUD presence). Past obstetric, medical and surgical history may be important. Pap smear history is also relevant.

Physical examination

Tissue passed should be examined. General examination assesses haemodynamic status and abdominal tenderness, free fluid and masses. Speculum examination helps assess the amount of bleeding, local causes, cervical dilatation and presence or not of products of conception. Vaginal examination may reveal

adnexal or cervical motion tenderness and or an adnexal mass (ectopic, although physical examination is often unremarkable in a woman with a small, unruptured ectopic).

Ultrasonography

Transvaginal ultrasonography is the cornerstone investigation, performed to determine whether the pregnancy is intrauterine and if it is, whether it is viable with foetal cardiac activity visualised (see flow chart).

Laboratory tests

There is no role for monitoring Quantitative Human Chorionic Gonadotrophin (β hCG) levels once intrauterine pregnancy has been established sonographically. However, ultrasound is inconclusive in up to 30% of women, and β hCG then guides management.

The absence of intrauterine pregnancy, with the β hCG >1500 IU/L, strongly suggests ectopic pregnancy.

Serial falling β hCG levels are consistent with a nonviable intrauterine pregnancy or involuting ectopic pregnancy (but cannot confirm the site of pregnancy).

Appropriately rising β hCG levels fit best with a viable intrauterine pregnancy (85% show a rise in β hCG greater than 66% over 48hours), although some ectopic pregnancies also display this pattern.

β hCG levels that have plateaued or are rising slowly suggest an ectopic pregnancy.

Anti D

Women with first trimester vaginal bleeding should have a Blood Group and antibody screen and according to NHMRC guidelines, those who are Rh D negative should receive Anti D.

Management - threatened miscarriage

Uterine bleeding in the presence of a closed cervix and sonographic visualisation of an intrauterine pregnancy with detectable foetal cardiac activity is likely to be due to disruption of decidual vessels at the maternal-fetal interface. Demonstration of fetal heart activity is generally associated with a successful pregnancy rate of 85-97%. Women need explanation and reassurance. There is insufficient evidence to recommend bed rest.

Management - missed, inevitable, incomplete and complete miscarriage

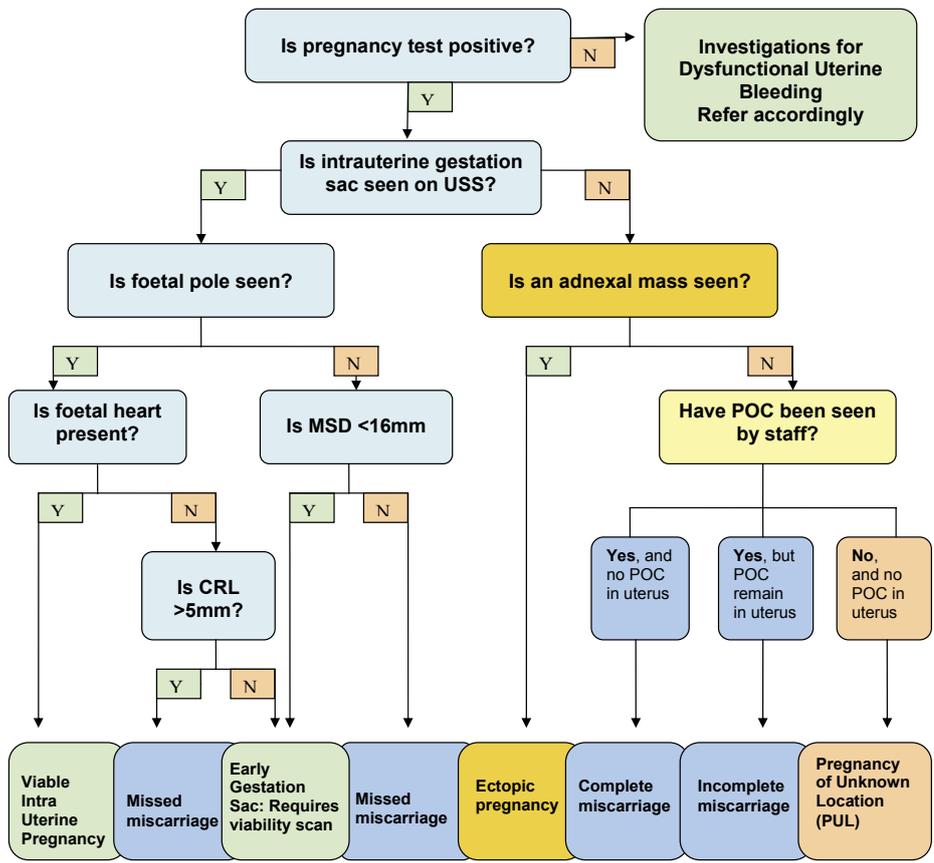
Missed miscarriage could be an anembryonic pregnancy or an early foetal demise. Diagnosis of anembryonic pregnancy is made when there is presence of a gestational sac larger than 16 mm without evidence of embryonic tissues (yolk sac or embryo); and embryonic demise is when an embryo larger than 5 mm is seen without cardiac activity.

Most first trimester miscarriages occur completely and spontaneously without intervention. Although dilatation and curettage has historically been the treatment of choice, several recent trials confirm that expectant management or medical management with misoprostol can be as effective and safer, while offering the woman more control over her care.

In incomplete miscarriage, where part of the products of conception remain in situ, high success rates occur with expectant management (75-94%) and medical management (96-100%). The same applies in inevitable miscarriage, that is, where products of conception are completely in-utero, however with a dilated cervix.

However, expectant management is more

Algorithm: Early Pregnancy Bleeding/Pain – Ultrasound Scan Diagnosis



MSD – Mean Sac Diameter; CRL– Crown Rump Length; POC – Products of Conception

Table 1

Criteria for managing Ectopic Pregnancy	
Expectant Management	<ul style="list-style-type: none"> • Absent or minimal clinical symptoms • No sign of rupture or intraperitoneal bleeding • Pelvic free fluid minimal (<100ml) • Tubal mass of <2cm • No yolk sac/foetal pole seen • Quantitative βhCG concentrations <1000 iu/l and declining progressively
Medical management	<ul style="list-style-type: none"> • Stable vital signs and few symptoms • Unruptured ectopic pregnancy • Serum quantitative βhCG < 5000 IU/L • Size of ectopic mass < 3.5cm • Absence of foetal cardiac activity • Normal LFT's, U & E's, and FBC • Patient compliance for regular follow ups (average follow up 35 days) • No contraindication for Methotrexate therapy
Surgical treatment	<ul style="list-style-type: none"> • Unstable vital signs or signs of haemoperitoneum • Uncertain diagnosis • Advanced ectopic pregnancy (e.g. high βhCG levels, large mass, cardiac activity) • Patient unreliable for follow-up • Contraindications to observation or methotrexate

likely to fail in missed miscarriage (14-50% success) compared with medical management (80-90% success). Women treated expectantly have more outpatient visits than those treated medically. Women treated medically have more bleeding but less pain than those treated surgically. There is no real difference in the risk of infection between these options (2-3%). Satisfaction rates are comparable if women are given choice.

A complete miscarriage can be diagnosed by

an empty uterus on ultrasound scan only if the products of conception have been visualised or examined pathologically. If no specimen is available for examination, then serum β hCG levels should be followed serially until negative.

Management - ectopic pregnancy

Current treatment favours medical and laparoscopic management, with expectant management reserved only for patients with a

declining β hCG of <1,000 mIU per mL (1,000 IU per L). Open surgical management is rarely required even for patients with tubal rupture and haemoperitoneum (see Table 1).

Management - molar pregnancy

- Refer to specialist centre (KEMH in WA)
- Dilatation and Suction Curettage
- Weekly serum β hCG until negative
- Monthly β hCG for six months once negative
- Avoid pregnancy for the period of follow up
- Check β hCG 6/52 after any pregnancies

Local causes

These conditions are diagnosed by visual inspection, with ancillary tests as indicated. Management of these conditions depends on the specific condition. ■

Size of the problem:

- 1 in 4 (25%) women experience bleeding and /or pain in early pregnancy
- 1 in 2 (50%) of those who bleed will miscarry
- 1 in 100 (1%) women suffer recurrent miscarriage (i.e. three or more)
- 1 in 50-80 (1.3-2%) pregnancies are ectopic
- 1 in 750 – incidence of Gestational Trophoblastic Disease