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Pregnancy Management & Delivery
Advanced Endoscopic (key hole) Surgery
Endometriosis
Urinary Incontinence
Pelvic floor problems
Pap smear abnormalities
Infertility & IVF

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Early Pregnancy Bleeding

By Samuel Soo

It is often an exciting moment for pregnant women and their families when a pregnancy is confirmed, even for doctors. I certainly felt an overwhelming sense of anticipation when my wife told me she was pregnant… after I stopped worrying about the one thousand things that will probably go wrong for us.

However, some of the excitement is often overshadowed by problems such as early pregnancy bleeding; the misinformation given by well intentioned family members and friends probably do little to help too.

Early pregnancy bleeding is a common problem. As doctors we often tend to think the worst; and rightly so in some cases as it could indicate an ectopic pregnancy or a miscarriage. Studies have shown that anywhere from 25-30% of women do experience bleeding in early pregnancy. However over half of the pregnant women who bleed, do not have miscarriages and the majority of miscarriages occur before 12 weeks.

So when it is it an unsuccessful pregnancy?

Ultrasound has become a useful tool in assessing these patients. There are a few general rules that may help:

1. It is safe to say that failure to detect an embryo and fetal heart beat when the gestational sac is greater than 25mm likely equates an unsuccessful pregnancy.
2. If an embryo is > 6mm and a fetal heart beat is not seen, it means an unsuccessful pregnancy.
3. Fetal bradycardia of <80 beats per minute usually results in fetal demise.

However;

1. When a fetal heart is present, then 97% will have a normal outcome.
2. Although the finding of a subchorionic haematoma is of concern, only approximately 10% will result in a miscarriage.

So when is a quantitative bhCG level helpful?

Ultrasound has it limitations. Often in the presence of inconclusive ultrasound findings, an empty uterus, or a suspicion of an ectopic pregnancy, a repeated bhCG level in the mid first trimester may be useful.

1. Studies have shown that 87% of ectopic pregnancies have a bhCG doubling rate >2.7 days.
2. If the bhCG level increases but by <66% over 48 hours then there is an 87% chance it is an ectopic.
3. No normal pregnancy has been associated with a doubling time >7days in the mid first trimester.

Some important facts about bhCG:

May be detected in levels around 100-600 by the first missed period.

bhCG levels peak at 8 to 10 weeks gestation at around 100,000 and falls to approximately 10,000 by the 20th week of gestation.

A gestational sac should be seen at transvaginal ultrasound when the bhCG level is >2000 IU/L. If an empty uterus is seen instead, then an ectopic pregnancy should be excluded.

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Interesting Cases

Case 1

30 year old with PV spotting at 5 weeks with an initial ultrasound then showing small gestational sac of 10 mm with bhCG level of 1100. Repeated bhCG level in 3 days revealed a bhCG level of 1200 in the same laboratory and an ultrasound showing the same sac size. A diagnosis of a failed pregnancy was given but patient decided to wait for another ultrasound. Ultrasound in 1 week showed a viable intrauterine gestation with a heartbeat with a bhCG of 5000. She went on to have a normal pregnancy.

Lessons learnt: This happened to me when I was a junior registrar and the memory of the angst I caused the patient has thought me to be more cautious when dealing with early pregnancy problems. My mistake was to rely on a bhCG level and an ultrasound that was repeated too soon. In the absence of a suspicion of an ectopic pregnancy clinically and on ultrasound, it is best to wait a week to repeat the tests.

Case 2

29 year old previously well patient presents feeling a little dizzy to the emergency department. BP of 100-110/60 with a HR of 60-70. She does not have any abdominal or pelvic discomfort. The O&G registrar was called to see patient as the bhCG was found to be 300. Abdominal examination revealed no tenderness and a normal non tender gravid uterus found on PV. No ultrasound facilities available at 3am. In the absence of any severe symptoms besides dizziness, the patient was treated with Maxolon and prepared to be sent home as the emergency department and the ward has run out of beds. A deal was struck that if the Hb was normal, the patient may be sent home. The Hb had taken over 4 hours to return but showed a result of 59 by which time the BP dropped to 80/40. Laparotomy revealed 2 liters of blood and a ruptured right ectopic pregnancy.

Lessons learnt: This taught me that clinical signs of ruptured ectopic pregnancies are not reliable and in young patients, a tachycardia may be absent in the presence of massive haemorrhage. Despite the pressure on beds, it is best to admit patients where the benefit of observation over time usually reveals the diagnosis.

Case 3

26 year old with PV spotting and right iliac fossa pain at 10 weeks gestation. Ultrasound report indicated a viable intrauterine pregnancy appropriate in size for 10 weeks and a bhCG level of 15,000. A repeated beside ultrasound in the emergency department by the registrar showed the same findings. As a tubal ectopic classically ruptured around 6 weeks and an intrauterine pregnancy was seen, the patient was sent home. She returned 12 hours later in shock with an Hb of 50. A laparotomy revealed a ruptured right cornual ectopic pregnancy which was removed and the patient recovered well.

Lessons learnt: This unfortunate incident happened to one of my colleagues where I was training. A cornual ectopic pregnancy is very rare and in inexperienced ultrasonographers, it may be missed. They also classically rupture later at around 10 weeks gestation.

Westmead Fertility Centre

Dear Colleagues, I am pleased to announce my association with Westmead Fertility Centre. I am currently able to provide consultation and treatment for fertility issues through Westmead Fertility Centre which is based at Westmead Hospital.

Westmead Fertility Centre is a privately funded entity that provides fertility treatment such as IVF at an affordable cost. The results of Assisted Reproductive Treatments is comparable to other centres in the world and aim to provide a service that has the patients best interest at heart yet affordable. The centre achieves this by being essentially non profit with the majority of funds directed at improving results and better patient care.

For further information please do not hesistate to contact me on 9635 4333 or Westmead Fertility Centre on 9845 7484.

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