SUMMER | 2017

The Wesley HOSPITAL
Caring for you for life

Medilink

Medical Professionals direct link
to programs and services at the Wesley

Maternity
Special Edition

Articles in this issue:

Now treating 10 brain lesions simultaneously in only 30 minutes.

Genesis CancerCare Queensland introduces BrainLab - 'Elements' Stereotactic radiosurgery (SRS). An addition to the comprehensive SRS and SRT programs treating a variety of malignant and benign tumours.

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Dr David Schlect and Dr Nicola Lowrey

Our experienced team including Dr David Schlect and Dr Nicola Lowrey have delivered Stereotactic Radiation Therapy in Queensland for almost 20 years.

To refer a patient for Stereotactic treatment or to find out more about this advanced technology call 07 3377 4200 OR visit us at genesiscancercareqld.com.au

Welcome

Michael Gillman
Director of Business Development

I am very happy to have joined The Wesley Hospital team and to present this special edition of Medilink with a focus on our wonderful Maternity unit.

The Wesley Hospital Maternity Unit is a family focused team of highly qualified experts who view childbirth as a healthy life event, which is to be celebrated. Our maternity unit at the Wesley Hospital has been operating for 27 years and over 1000 babies are born at the Wesley each year. We have over 20 obstetricians and 80 midwives on staff, along with industry experts including paediatricians, physiotherapists and lactation consultants. The maternity service offers a special care nursery for premature births for babies needing extra attention, a home visiting service, private en-suite rooms, and antenatal classes. Our whole team focuses on delivering continuity of care for your patients and babies.

As you would know, The Wesley Hospital has a reputation for excellence in all of the clinical areas that it covers and the maternity unit continues that reputation along with a more personalised level of service that can be given to your patients. This same level of service is often not possible in the larger units at other Hospitals.

In this edition of Medilink, I have included topics that will be of use to General Practitioners in their day to day clinical work.

I look forward to seeing many of you at our medical education events that will continue throughout 2018.

Merry Christmas

Michael Gillman

Wesley Obstetricians


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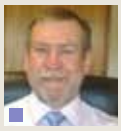
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For information visit
wesley.com.au/maternity

Double trouble in the Maternity Unit's Special Care Nursery

The Wesley had the pleasure of looking after an incredible four sets of premature twins at our special care nursery recently, and believe it or not there were two more sets on the way!

The Wesley Hospital's Special Care Nursery provides care for babies with illness and premature babies from 32 weeks gestation. It is designed to provide medical and nursing care that is tailored to suit your baby's specific needs.

The Special Care Nursery has 12 beds and is supported by highly experienced neonatal intensive care trained staff, lactation consultants and midwives. Highly experienced Paediatric support is also available 24 hours a day.


Thomas & Arlo


Archer & Amelia


Claudia & Grace


Tommy & Finn

Investigations to be ordered when pregnancy is confirmed in the General Practice setting

National Antenatal Care Guidelines in Australia are currently undergoing a review with their expected publication in 2018. Traditionally patients will attend their GP who will confirm the pregnancy, order screening tests and determine the preferred Model of care with the patient.

Currently accepted antenatal screening tests include;

+ FBC
+ Blood group & antibody screening
+ Hepatitis B/HIV/Rubella/Syphilis serology
+ MSU for asymptomatic bacteriuria

Screening for Hepatitis C is based on risk factors and not currently recommended. Chlamydia is also not routinely recommended but should be considered in women under 25 years of age. The new National Cervical Screening Program, with primary HPV screening, comes into effect on the 1st December and should be followed in the pregnant patient as in the non-pregnant patient.

Screening all asymptomatic patients for CMV and toxoplasmosis is not recommended, as there is no evidence to supports its clinical and cost effectiveness.

The RANZCOG does not recommend routine screening for Vitamin D deficiency but it should be considered in women at risk. This includes women with reduced sun exposure, regular sunscreen users, dark-skinned women, mothers of infants with Rickets and any women with a BMI over 30.

The American Endocrine Society recommends that TSH levels be maintained between 0.2-2.6 mU/l in the first trimester. This is however in patients with pre-existing Thyroid disease. Studies in the United Kingdom have shown that a TSH between 4.5-10 mU/l carries a 1.8 times increase in risk of miscarriage and if the TSH is greater than 10 a 3.95 times increase in risk. However women with levels 2.51-4.5 mU/l did not appear to have an increased miscarriage risk. As a result routine screening of TSH in all pregnant women is probably not justified.

Screening for Down's Syndrome should also be offered to all pregnant women and this includes Non-invasive Prenatal Testing (NIPT), combined first Trimester screening (Nuchal translucency plus beta-hCG & PAPP

Dr Stephen Cook
Obstetrician & Gynaecologist

A) and definitive invasive testing (CVS and Amniocentesis). Combined first trimester screening is the most accepted and widely available. It detects 95% of cases of Down's syndrome with a false positive rate of 3%. It however gives more information on morphology being able to detect acrania, holoprosencephaly, exomphalos, gastroschesis, megactystis and cystic hygromas to name a few. Recent developments with the addition of Placental Growth factor and alpha-fetoprotein in association with low PAPP A levels may prove helpful in predicting patients with poor pregnancy outcomes.

NIPT testing is more accurate than combined first trimester screening for Downs Syndrome but is more expensive and does have some limitations with regard to the amount of cell-free DNA detected in certain cases. This may then require retesting or a nil result being reported. False positives however can and do occur. As a result invasive testing will still be necessary in some cases and cannot be fully avoided. Patients therefore need detailed counseling prior to and in some cases after testing.

The investigations listed above apply to screening in the first trimester in the General Practice setting once a pregnancy has been confirmed. Further testing obviously occurs as the pregnancy progresses including ultrasound screening for structural anomalies, Gestational Diabetes, GBS and further checks for anaemia etc. These however lie outside the scope of this paper. ■

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Dr Pauline Joubert
Obstetrician & Gynaecologist

Red Flags During Pregnancy

Pregnancy is a wonderful adventure that involves many physical changes. Many of these changes are normal and result in common symptoms. It can be difficult to discern if and when these should be taken more seriously.

It is impossible to think of everything that might be called a *"red flag"* and as doctors these may be symptoms or signs or results of routine investigations ordered through pregnancy.

This article does not cover red flags in the history or risk factors often spoken of, for example, elevated BMI, older mothers, family history of congenital anomalies and chromosomal disorders, family history of pre-eclampsia or previous pre-eclampsia and cholestasis, cervical surgery or smoking and drug use, to name a few! They each deserve an article of their own.

In summary

Red flags in the first trimester:

+ Vaginal bleeding
+ Shoulder pain
+ Unilateral pelvic pain
+ Severe hyperemesis
+ Empty uterus on ultrasound
+ Abnormal ßHCG changes
+ Extremely low PAPP-A on Combined First Trimester Screen (CFTS)
+ Thickened nuchal fold on CFTS

Red flags in the second and third trimesters:

+ Shorter cervix at morphology ultrasound
+ Increased discharge with pelvic pressure
+ Increased watery discharge
+ Bloody vaginal discharge
+ Unilateral leg oedema with/without pain and erythema
+ Shortness of breath (SOB)
+ Itch without a rash
+ Visual disturbances
+ Symphysis fundal height differing from gestational age
+ Right Upper Quadrant pain
+ Dipstix proteinuria
+ Intermittent lower abdominal pain
+ Reduced fetal movements felt

PTO...

Red Flags in the First Trimester

• Vaginal bleeding
This is very common. Some literature says up to 40% of women have bleeding in the first trimester. This is most commonly related to placental implantation but may be after intercourse due to cervical friability. The only way to know if everything is alright is to do an ultrasound scan. There is evidence emerging suggesting any woman who has a first trimester bleed is at increased risk of pre-eclampsia so it is important to mention this in a referral for consideration of early low dose aspirin.
If they are Rhesus negative the guidelines say anti-D need only be considered close to 12 weeks but many doctors would give it regardless and there is no harm in doing so.
An ectopic also needs to be excluded.

• Shoulder pain
This is a symptom and sign of peritoneal, specifically diaphragmatic, irritation and makes us think of fluid or blood within the pelvis. This could be due to an ectopic pregnancy, or a bleeding or ruptured corpus luteum. An ultrasound is required along with quantitative ßHCG, full blood count and blood group as a starting point.

• Unilateral pelvic pain
This is very common and early on is most often due to a corpus luteal cyst which is normal, however, could be due to an ectopic pregnancy. In late first trimester, second trimester it could be ligament pain. Ligament pain classically is in the iliac fossae and will come on suddenly and severely with a cough or sneeze or sudden movement, stop the woman in her tracks but ease as they stand still and over a short period of time.

• Severe hyperemesis
This may be a symptom of an extremely high ßHCG which can be a sign of a multiple pregnancy or a hydatidiform mole. A very high ßHCG can be associated with an increased risk of Trisomy 21 and will reveal itself in the CFTS as they include the biochemistry.

• An empty uterus on ultrasound
Think ectopic until proven otherwise

• Quantitative ßHCG
A rise over 48 hours of less then 66% is abnormal and may herald a failing intra-uterine pregnancy or an ectopic pregnancy. A decrease of less than 50% over 48 hours may be a sign of an ectopic pregnancy. An ultrasound is essential with follow-up of the ßHCG.

• Extremely low PAPP-A on CFTS
Definitely <0.4 MoM
There is an association with an increased risk of pre-eclampsia, intrauterine growth restriction and premature labour and delivery. This would change the discussion about low dose aspirin starting before 14 weeks and increased monitoring from late second trimester of maternal and fetal well being.
This is changing as we speak so I would recommend being mindful but "watch this space".

•Thickened nuchal fold despite low risk ratios wrt chromosomal abnormalities
Most often if the nuchal fold is thickened this will be reflected in the results of the CFTS, however, sometimes the ratios are within the low risk category but it still means we need to ensure the baby is checked thoroughly for other causes of the thickened nuchal fold, for example a cardiac abnormality, and its growth needs to be monitored more carefully as the pregnancy progresses. Consider referral to a maternofetal medicine ultrasound centre for the morphology scan.

Red Flags more common in the second and third trimester

• Increased discharge with increased pelvic pressure and "heaviness"
Although extremely common and most often normal, can be a symptom and sign of cervical incompetence. This needs further delving into their history and a review of the cervical length at their morphology scan and then consideration of cervical length assessment by transvaginal ultrasound if ongoing concerns.

• Cervical length at morphology ultrasound
Cervical length less than or equal to 25mm needs urgent referral to an obstetrician. The woman's previous obstetric history impacts the decision that follows. Progesterone versus cervical cerclage is the challenge but at the very least the woman needs to have that discussion with an obstetrician and more frequent follow-up.

• Increased watery vaginal discharge
If the membranes rupture it can be with an obvious "gush" that is hard to mistake, however, some women experience what is known as a "hind water leak" that is a small hole in the membranes that continuously leaks a small amount. A good differentiating question I have found is if they are ever dry then it is unlikely to be their membranes that have ruptured. There are swab tests available that are simple to administer and fairly accurate so if you have any concerns it is always safer to send the woman to the hospital for review.

• Bloody vaginal discharge
This is very common post coitus due to the fragile cervix. However, if not within 24 hours of intercourse, is not likely to be due to that. It is always worth considering other causes regardless. Check the placental location and review if there is associated pain – constant or intermittent – and fetal movements. Painless bleeding can be placenta praevia. Pain can be due to an abruption or labour that is instigated due to uterine irritation from any bleeding. I would recommend in-hospital review for all bleeding so that the fetal wellbeing can be ascertained by CTG and/or ultrasound. A speculum is important to visualise the cervix and a thorough assessment would include the tone of the uterus, monitoring for contractions and giving steroids in case delivery does happen soon.

• Unilateral leg swelling, with or without pain and redness
The left leg is often more swollen than the right due to the longer course of the left iliac vessels across the midline being compressed by the gravid uterus. Oedema is very common in pregnancy and worse in the hotter climate of Brisbane. However, a DVT should always be in the back of one's mind. A lower limb venous Doppler scan is non-invasive and readily organised.

• Shortness of Breath
80% of pregnant women experience this symptom throughout their pregnancy. It can be difficult to ascertain if it is more serious and the resulting investigations are invasive and involved, however, a pulmonary embolus is life threatening. A lower limb Doppler is easy and simple and if there is a DVT the management would be the same as if there is a pulmonary embolus so often it can be a helpful investigation if positive. D-Dimers are only helpful if negative which they rarely are in pregnancy. Be very concerned if the SOB is worse when lying down and ask specifically about orthopnoea and paroxysmal nocturnal dyspnoea as they are a sign of cardiac impairment, an uncommon but serious event in pregnancy.

• Itch WITHOUT a rash
This may be a sign of cholestasis of pregnancy which has consequences for the mother and the baby, Liver functions are important, but elevated fasting bile acids are diagnostic and take about 1 week to return with a result so do them early.

• Visual disturbances not related to position change and that are persistent and pervasive.
A headache that is not resolved with Panadol and RUQ / epigastric pain need review for pre-eclampsia although all are very common and have other benign causes.

• Symphysis-fundal height not equal to the number of weeks gestation
When measuring the height of the fundus to the pubic symphysis with a simple tape measure it is expected that the measurement in centimetres will be equal to the gestation in weeks "give or take" 2cm. If the fundal height is 2cm greater or less than the gestation think about why and the reason may require a growth and wellbeing ultrasound to exclude intra uterine growth restriction, polyhydramnios, fetal macrosomia, to name a few.

• Right upper quadrant pain
Most commonly due to feet caught under ribs or musculoskeletal. However, can be a symptom of liver haematoma in pre-eclampsia or cholelithiasis and cholecystitis. Check the woman's blood pressure, urine for protein and if they have any associated nausea and vomiting. Liver functions, lipase and ultrasound are a few starting investigations.

• Persistent dipstix proteinuria
Either persistent 1+ proteinuria on dipstix or 2+ at any time. Send a spot random urine protein/creatinine ratio and check their blood pressure.

• Intermittent lower abdominal pain
This may be early labour but Braxton-Hicks contractions occur more frequently the closer to the due date a woman is and with each subsequent pregnancy. They occur more often at the end of the day. I recommend the woman try taking 2 panadol with a big glass of water then sit on the couch for 30 minutes. If the pains persist or worsen then they definitely need review, if they settle then they are most likely not labour contractions. It is a good trial of therapy targeting the triggers that instigate contractions often, namely dehydration and increased activity.

• Reduced fetal movements
The most important indicator of fetal wellbeing is adequate movement. This is difficult in that the recommended number and pattern changes regularly and each baby has their own pattern. Often if a woman is busy and or preoccupied, she will not feel them and interpret them as reduced. There are a multitude of apps that can be used to count fetal movements and if in doubt we ask the woman to come in to birth suite for a CTG. It is not worth ignoring this sign. I tell all my ladies to try a cold, sweet drink and sit still for 20 minutes while they drink it if they are worried. If the baby moves in response to this it is very reassuring as they have the ability to respond to this non-stress test. Often this results in them not needing to come in to the hospital for review. If the baby does not respond, however, a review in the hospital is essential.

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By no means is this an exhaustive list. As a general rule, after approximately 20 weeks, any complaint a woman has, if the baby is moving and there is no abnormal discharge I am immediately less concerned. The next question to ask is if their bladder and bowels are normal because they are great mimics. If these are all normal then it means everyone involved can generally take a breath and carefully examine the complaint in more detail to ascertain if there is something requiring escalation.

A comment I often make to women is that we aim to exclude the dangerous things for example, premature labour and abruption, the things we can do something about, for example a UTI or constipation, and then we end up managing symptoms and either it will go away or become more obvious over time.

Pregnancy is a very emotional time and with the relatively rapid changes that occur to accommodate the new life created and developing, it can be scary and overwhelming. The line between common symptoms and signs that merely require our reassurance and acknowledgement as normal and those that require further investigation and intense follow-up is fine and difficult to ascertain at times. Always feel free to call an obstetrician for advice. It is rare that you would be "reprimanded" so to speak for investigating if you have concerns versus choosing to ignore signs and symptoms. ■

Dr Ben Kroon
Obstetrician &
Gynaecologist

The GP and shared care

Shared care is a collaborative model that allows patients to have their GP participate in the provision of antenatal care.

For shared care to be safe and effective, all involved parties should:

+ **Be familiar with relevant risk factors**
+ **Follow appropriate consultation and management guidelines**
+ **Collaborate and communicate in a timely fashion**
+ **Accurately document all visits**
+ **Recognise the assessment of risk is a continuing process throughout the pregnancy**

Routine pregnancy management

All women in early pregnancy should be informed about:

1. Potential teratogens (medications, alcohol, X-rays etc.);
2. Lifestyle modifications in pregnancy –
   - dietary precautions (www.eatforhealth.gov.au)
   - cessation of cigarette smoking and recreational drug use
   - optimal gestational weight gain in pregnancy (note – repeated weighing should be reserved for women in whom it will change clinical management).

BMI at commencement of pregnancy	Weight	Total recommended gestational weight gain	Weekly recommended weight gain
<18.5	Underweight	12.5-18kg	0.51 (0.44- 0.58)
18.5-24.9	Normal	11.5-16kg	0.42 (0.35- 0.50)
25-29.9	Overweight	6.8-11.3kg	0.28 (0.23-0.33)
≥30	obese	5-9.1kg	0.22 (0.17 – 0.27)

   - exercise in pregnancy,
   - work and travel precautions (including Zika advice)
3. Folic acid supplementation - minimum of 0.4mg folic acid, 5mg daily if anticonvulsant use, pre-pregnancy diabetes, previous child of family history of spina bifida or BMI >30
4. Iodine supplementation - 150ug daily po
5. Influenza vaccination (when pregnant) and pertussis vaccination (28-34 weeks)

Schedule of visits

Exact schedule may differ depending on primary provider and risk assessment of individual patient, but generally 4 weekly from 14 – 28 weeks, then 2nd weekly until 37 weeks, then weekly.

Clinical assessment

All women should have a directed clinical assessment at each antenatal visit, with a focus on early diagnosis of pregnancy complications. Fetal movements and maternal wellbeing must be assessed. Clinical assessment should include BP measurement, screening for general maternal wellbeing, measurement of symphysio-fundal height (SFH). Fundal height (in cms) should approximately equal gestational age.
If serial symphysis-fundal height (SFH) measurements are flattening (>2cm behind gestational age) the woman should be referred for a targeted fetal ultrasound

Routine investigations

18-20 weeks - All women should be offered an obstetric ultrasound screening for fetal morphology and placental localisation.

28 weeks - Full blood count (If anaemia or thrombocytopenia are detected, further investigation is warranted), blood group antibody screening and screening for gestational diabetes mellitus with a 2 hr glucose tolerance test. Syphilis, hepatitis B / C and HIV repeat screening should be considered in high risk individuals Anti D (625iu) should be administered at this visit to Rh negative individuals.

Pertussis (dTpa) vaccination should be recommended between 28-32 weeks to all women

Group B Streptococcal Disease (GBS) – Universal culture-based screening, using combined low vaginal +/- anorectal swab at 35-37 weeks gestation, or a clinical-risk factor based approach are both acceptable strategies for reducing early onset group B strep disease. Queensland Health guidelines currently support a risk factor based approach, so GPs do not need to routinely swab pregnant patients.

Late tests for fetal wellbeing – Testing of feto-placental function should be performed when indicated on clinical grounds - either through a clinical suspicion of placental insufficiency, a predisposing factor for placental insufficiency or through an inability to clinically ascertain fetal growth (e.g. obesity).

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