HUTT maternity
Hutt Valley Maternity Care

HUTT VALLEY DHB

Document ID: MATY107	Version: 1.0
Facilitated by: Eleanor Martin, Educator	Last reviewed: February 2018
Approved by: Maternity Quality Committee	Review date: February 2020

Non Obstetric surgical procedures during pregnancy Guideline

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

Scope
Obstetrics
Anaesthetics
Surgery
Midwifery staff
Paediatrics
Theatres
MAU staff

Contributors
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Introduction
Up to 2% of pregnant women undergo surgery each year for non-obstetric conditions. These risks can arise from the procedure or from the disease process itself. This guideline will cover issues to discuss in the planning and consenting process, fetal monitoring perioperatively and when to obtain obstetric advice.

The risks are: fetal loss, fetal distress, preterm labour and preterm birth.

Recommended procedure
Please see flowchart 1 at the end of the summarised guideline.

Women of childbearing age
A pregnancy test should be done on all women of reproductive age undergoing non-obstetric surgery. If negative, routine care can proceed. If it is positive, a serum beta-HCG and a pelvic ultrasound should be performed to date the pregnancy and check for fetal anomalies.

Timing of surgery
Once gestation is confirmed, the procedure needs to be categorised into elective, non-elective and category 1/ life threatening.

1. If elective, the procedure should be delayed until at least 6 week post-partum.

2. If the procedure is non-elective, then ideally it should be planned to be done within the second trimester when the risks of miscarriage, fetal anomaly and pre-term labour are at their lowest.

3. Category 1 / life threatening surgery must proceed at any gestation to avoid potential risk to the mother.

Consent: helpful information
Timing of surgery with regards to gestation appears to be critical in fetal outcome and therefore a decision to proceed with surgery generally needs to involve a multidisciplinary team involving surgeons, obstetricians, paedatricians and anaesthetists. An overall miscarriage rate after surgery is around 6% increasing to 10.5% in the first trimester. In the first two weeks of gestation (i.e. 4-6 weeks since last menstrual period), the fetus is either lost or preserved intact. During organogenesis, between 3rd and 8th week gestation, exposure to teratogens can cause major structural abnormalities. After 9 weeks gestation, drug exposure can cause functional changes or growth restriction and in late pregnancy, the issues of navigating around a large gravid uterus and maternal airway management need to be considered. The more advanced the pregnancy, the greater the risks of preterm labour. This is largely due to any uterine handling and the disease process itself, as opposed to anaesthetic agents, dose or techniques. The acute lower abdominal and pelvic inflammatory conditions are associated with the highest risk. For example, following appendectomy there are reports of a pre-term labour risk of 4.6% and rates of fetal loss at 2.6%, rising to 10.6% if peritonitis is present.

The fetal viability is set at 23-24 weeks gestation (case dependant) and therefore any procedures that are planned to be done after this time needs to be discussed with the obstetric and paediatric team, as should any complications occur then immediate delivery of the fetus may be required. In such a situation, the fetal outcome is significantly improved by the administration of antenatal corticosteroids (betamethasone 11.4mg IM) given 24 and 48 hours pre-delivery.

Anaesthetic considerations
- Aspiration prophylaxis
- Difficult airway assessment
- Hyperventilate as PaCO2 30mmHg is normal in pregnancy
- Avoid hypotension to maintain uteroplacental perfusion
- Left lateral tilt (15 degrees) after 20/40 gestation (earlier if fetal macrosomia, polyhydramnios or multiple pregnancy) to reduce aortocaval compression
- Consider regional anaesthesia and/or analgesia

- Consider neonatal transfer of drugs (eg. avoid NSAIDs in third trimester)

Fetal monitoring: pre-, intra- and post-operatively
The necessity for fetal monitoring will depend on gestation:

- 1st trimester: No immediate extra monitoring required.
- 2nd trimester: Between 16+0 and 27+6 – please call delivery suite to arrange a midwife to perform fetal heart auscultation for one full minute pre-procedure in surgical Day Stay Unit and post-procedure in recovery.
- 3rd trimester: 28+0 onwards please call delivery suite to arrange a midwife to perform fetal heart cardiotocogram (CTG) for 20-30 minutes pre-procedure in surgical Day Stay Unit and 20-30 minutes post-procedure in recovery. This should be performed once daily whilst an inpatient, or more frequently if concerns (please discuss with obstetrics on call).

If there are any concerns with the CTG or fetal heart, the midwife will contact the obstetric team on call for further management.

Post-operative considerations and discharge advice
After the procedure, surgical teams need to consider the need for thromboprophlaxis.

The symptoms of miscarriage and pre-term labour should be explained to the patient with advice to seek medical attention if necessary. The symptoms of miscarriage (applicable up until 22+6 weeks gestation) are lower abdominal period-like crampy pain, associated with vaginal bleeding. They should be advised to attend ED if:

- The pain is severe and not responding to analgesia (such as paracetamol or codeine)
- The bleeding is heavy (passage of large clots or soaking more than 2 sanitary towels an hour)
- The patient feels unwell, faint or dizzy.

The symptoms of pre-term labour (applicable for 23 weeks gestation onwards) are:

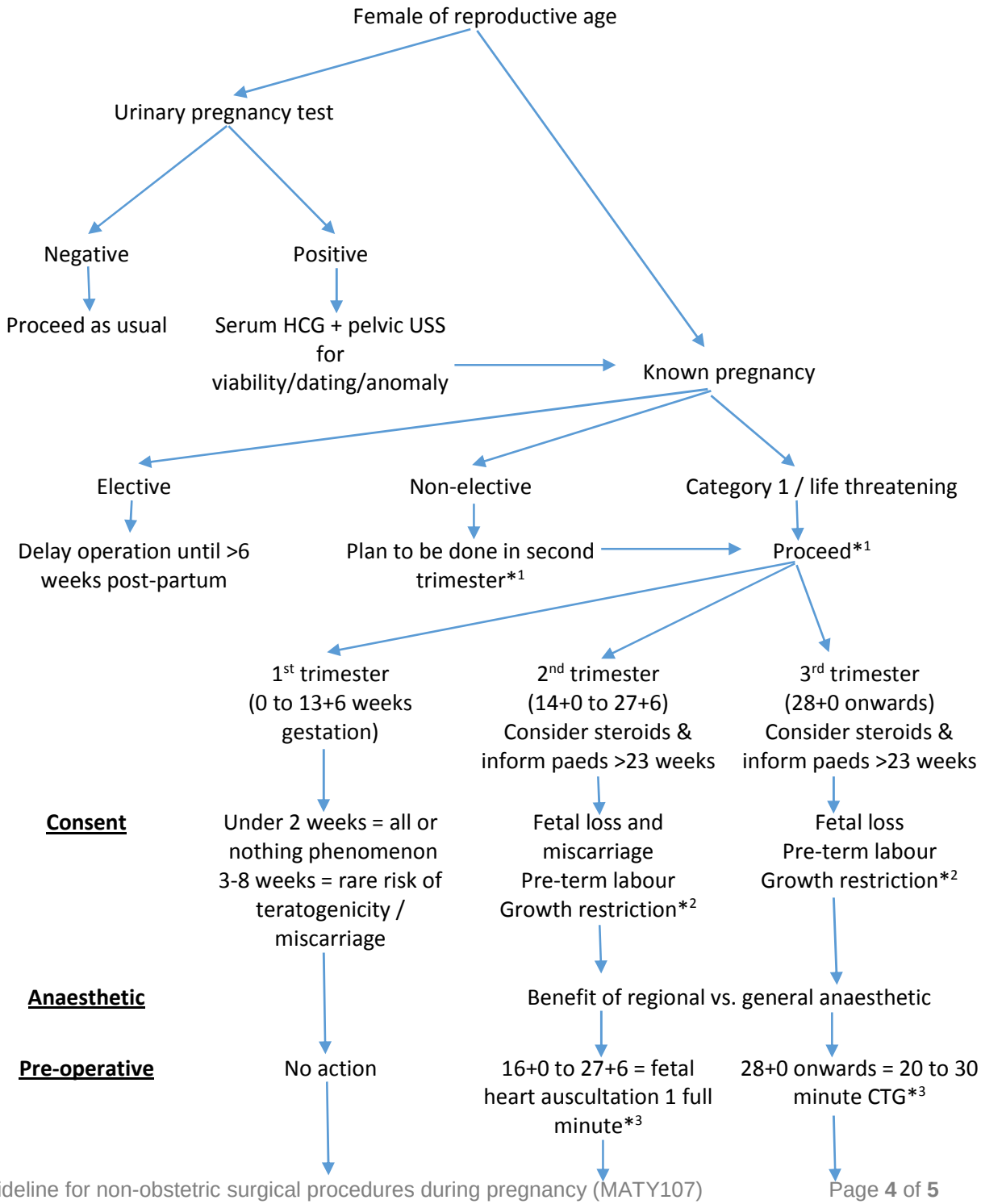
- Period-like crampy lower/central abdominal pain
- Coming every 15 minutes or more frequently
- Continuing to get more painful or frequent despite resting and drinking fluids
- Leaking of fluid vaginally or any vaginal bleeding

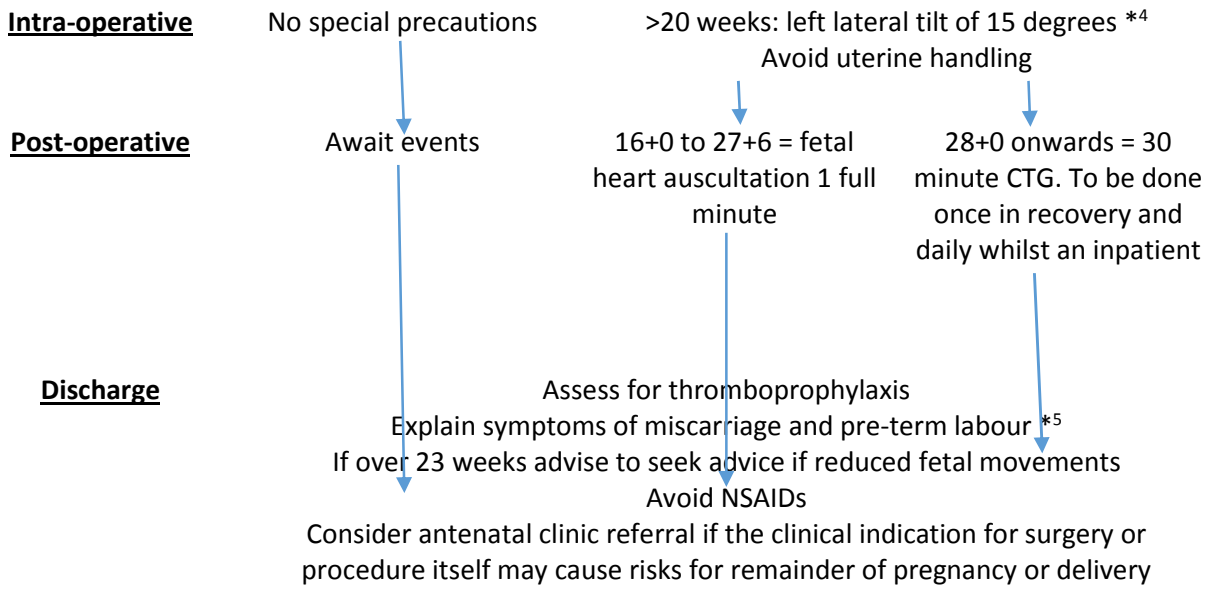
In this situation, the patient should be advised to contact their midwife immediately.

After 23+0 weeks gestation, the patient should also be advised to contact their midwife if they have any concerns regarding reduced fetal movements.

On discharge, please consider a referral to the antenatal clinic for further follow up for potential obstetric complications following the procedure e.g. intrauterine growth restriction.

Flowchart 1: Summarised guideline for non-obstetric surgery during pregnancy





*1 = Discuss with obstetrics on call
*2 = Obstetric team to consider steroid administration pre-theatre. If given, this would ideally be given 24 and 48 hours pre-procedure if maternal condition allows
*3 = Please ring delivery suite to arrange this with the charge midwife
*4 = This should be considered earlier if significant polyhydramnios or multiple gestation
*5 = Please refer to main body text for symptoms of miscarriage and pre-term labour.

References:

1. Pregnancy outcome following non-obstetric surgical intervention. Cohen-Kerem R, Railton C, Oren D, Lishner M, Koren G. Am J Surg. 2005 Sep;190(3):467-73.

2. Anaesthesia in pregnancy for non-obstetric surgery. Hool A. ATOTW 2010 Jun:1-9.

3. Anaesthesia for non-obstetric surgery during pregnancy . Upadya M, Saneesh P. Indian J Anaesth. 2016 Apr; 60(4):234-241.

4. Anaesthetic considerations for non-obstetric surgery during pregnancy. Reitman E. Br J Anaesth. 2011 Dec; 107(1):72-78.

Informed Consent

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).