MINOR SYMPTOMS OR DISORDERS IN PREGNANCY

Keywords: minor discomforts in pregnancy, reflux in pregnancy, heartburn in pregnancy, varicose veins in pregnancy, leg oedema, haemorrhoids, pregnancy nausea, vaginal discharge in pregnancy, pelvic pain in pregnancy, low back pain in pregnancy, carpel tunnel syndrome in pregnancy, leg cramps in pregnancy

This guideline includes information on the following conditions:

See also Clinical Guideline, O&M, Antenatal: Constipation- Management in Pregnancy

AIM

- To provide information on the management of a range of minor symptoms and disorders experienced in pregnancy.

GASTRO-OESOPHAGEAL REFLUX / HEARTBURN

Heartburn is common in pregnancy (incidence is 17-80%), and can occur in all trimesters, with increasing severity in later pregnancy.[1] There is increased likelihood of heartburn if the woman is multiparous, if there was heartburn prior to pregnancy and with increased gestational age.[1] Elevated levels of progesterone cause the lower oesophageal sphincter to become more relaxed allowing gastric reflux.[1, 2] Impaired gut motility and gastric emptying, and increased abdominal pressure from the gravid uterus may contribute to heartburn in pregnancy.[1, 3] However, gastric emptying in healthy pregnant women has been shown to be comparable to that of non-pregnant women.[3] Heartburn / reflux can lead to a burning or painful sensation in the upper part of the digestive tract and the throat.[1]

MANAGEMENT

Clinical History

- Diagnosis is based on clinical history.[1] Obtain a current history of symptoms and any previous history of reflux-type symptoms.[4]
- Symptoms of heartburn can be similar to epigastric pain associated with pre-eclampsia.[5] Exclude diagnosis of pre-eclamptic toxaemia (PET) – check blood pressure and perform urinalysis,[6] fetal growth, check for PET symptoms (>20 weeks gestation) and screening bloods if indicated.[5]

Dietary and other modifications

- Eat small frequent meals[2, 3]
- Avoid eating and drinking at the same time to reduce stomach volume[2]
- Avoid gastric irritants (foods & medications causing reflux)[3] e.g. chocolate, coffee, citrus juices,[2] tomato products[5], alcohol[3], fizzy drinks,[4] greasy/spicy/acidic foods[5]
- Avoid eating late at night[3] or within 3 hours of going to bed[4]
- Chewing gum[3] stimulates the salivary glands and may neutralise acid
- Cease smoking[3, 4]

Positioning

- Elevate the head of the bed[3] by 10-15cm.[4]
- Lying on the left side has been shown cause less frequent reflux[3, 4]
- Encourage an upright position where possible, avoiding lying down after meals[3]

Pharmacological interventions

Pharmacological interventions may be initiated if adjustments to life-style changes provide a poor response.[5]

- Antacids:
  - Simple antacids are used intermittently[3] however limited data is available on their use in pregnancy.[1, 4] Use an antacid that is safe in pregnancy.[5] Most calcium and magnesium-based antacids are considered safe at usual doses in pregnancy.[7] Liquid antacids are more effective than solid antacids.[7]
  - Avoid taking the antacid near the time of consuming supplemental iron (gastric acid facilitates the absorption of iron). Take antacids at least 1 hour apart from iron and other medications.[5]
  - Limit antacids containing calcium to 1g per day of elemental calcium[7] to prevent risk for hypercalcaemia, metabolic acidosis and renal insufficiency.
  - Avoid antacids containing sodium in chronic renal failure as they may cause fluid retention/ overload.[7]
  - Antacids containing magnesium trisilicates should not be used in high doses or long term in pregnancy.[4]
  - High dose aluminium containing antacids are not commonly recommended in pregnancy due to side effects such as constipation.[5]
- Consider histamine H2-receptor antagonists, e.g. famotidine, where appropriate
- Intermittent use of metoclopramide *(pregnancy category A)* is safe in pregnancy.[3]
- For severe symptoms, Omeprazole *(preg. cat. B3)* can be prescribed after medical review.[3]

VARICOSE VEINS AND LEG OEDEMA

Varicosities may develop in up to 40% of pregnant women.[3] The increase in blood volume during pregnancy and effect of progesterone relaxing the muscular walls of the veins causes increased pressure on the veins.[6] Varicose veins often improve three to four months following birth, and oedema generally reduces soon after birth.[8]

Evidence regarding successful interventions for varicose veins and leg oedema in pregnancy is lacking, however despite lack of adequate research, support measures such as use of compression stockings and elevation of the legs may provide comfort to women. Based on two small studies, reflexology or water immersion appears to improve symptoms for women with leg oedema.[8]

MANAGEMENT

Non-Pharmacological interventions

- Elevate the legs when at rest[3, 6, 8]
- Water immersion or compresses may alleviate symptoms[6, 8, 9] or spraying legs with hot& cold water[3]
- Reflexology may provide relief[6, 8]
- Avoid prolonged standing or immobility- take breaks to exercise or elevate the legs,[8] and avoid wearing of high heels[9]
- Avoid tight or restrictive clothing[9]
- Regular exercise improves calf muscle pump. Encourage ankle flexion exercise[8] for at least 30 minutes per day.[9]
- Compression stockings[3] may relieve swelling and aching of legs and prevent development of more varicose veins. Remove at night.[8]
- If resting for long periods women are advised to lie on their left side which decreases pressure on the veins in the legs and feet (the inferior vena cava is on the right side, and left-sided position relieves it of the weight of the uterus)[8]
- Encourage use of compression stockings for plane travel or long vehicle journeys.
- Note: Varicose veins are a risk factor for venous thromboembolism, and in combination with other VTE risk factors (e.g. long distance travel) may require VTE prophylaxis.[10] Discuss with medical team as required.

Whilst pharmacological treatment with rutosides may help varicose vein symptoms in late pregnancy, they are not yet shown to be safe for use in pregnancy.[8]

HAEMORRHOIDS

Haemorrhoids occur in up to 85% of women in late pregnancy and for many will resolve soon after birth.[3] The aetiology of haemorrhoids is similar to varicose veins, with veins becoming distended as the walls stretch, from increased blood volume, gravid uterus, and reduced venous return, resulting in haemorrhoids.[3] Progesterone and the gravid uterus also decrease intestinal motility, further affecting haemorrhoid formation.[3]

Conservative management

- Prevent / treat constipation[3] - high fibre diet, increased fluid intake,[5] exercise[2, 11]
  Aim for a soft, formed stool(Type 4 on the Bristol Stool chart).
  See Clinical Guideline, O&M, Antenatal: Constipation- Management in Pregnancy
- Stool softeners; avoid straining during defecation,[5] and encourage defecating with a strong urge in the morning and after meals when colonic activity is highest.[11]
- Mild analgesia.
- Saline or witch hazel compresses may be beneficial for pruritis and discomfort.[5]
- Topical local anaesthetic, anti-inflammatory, emollient[3] and/or corticosteroid agents may be beneficial[11] e.g. Rectinol®, Proctosedyl® ointments. However, creams containing topical anaesthetic may induce sensitisation,[11] and topical corticosteroids may exacerbate local infection and cause skin irritation so use should be limited for < 7 days.[7]
  Note: Topical products containing fluocortolones are contraindicated in pregnancy/lactation.[5] Additionally, topical corticosteroid-containing products should be avoided in the first trimester and avoid prolonged use in pregnancy/lactation.[5]
- Warmed baths may be used to decrease sphincter tone or improve venous congestion.[11]

Surgical Management

Occasionally, surgery is required.[3] Closed excision haemorrhoidectomy for symptomatic haemorrhoids using local anaesthetic can be safely performed during pregnancy.[11]

NAUSEA AND VOMITING

Approximately 50% of women experience nausea and vomiting in early pregnancy, and another 25% feel nausea alone. While in about 35% of these women the nausea and vomiting becomes clinically significant, only a small minority (0.3 - 1%) are diagnosed with hyperemesis gravidarum. This is characterised by persistent vomiting, weight loss of more than 5%, ketonuria, electrolyte imbalances, and dehydration. Nausea in pregnancy typically peaks at approximately 9 weeks

gestation, with 60% of cases resolving by the end of the first trimester, and in the remaining women 91% of these cases will resolve by 20 weeks gestation. Nausea and vomiting correlates closely to levels of human chorionic gonadotropin (hCG) levels in the majority of studies.[12] A Cochrane review found high quality evidence is lacking about provision of good supportive treatments and advice for women experiencing nausea and vomiting.[13] Although often referred to as 'morning sickness', only 11-18% report nausea and vomiting only in the morning.[14]

Note: Women attending a low risk midwives clinic for antenatal care, and who present with signs of hyperemesis gravidarum should be referred for medical review.

MANAGEMENT

Medical History

- Perform a medical history including the pattern of nausea and vomiting, fluid and dietary intake, factors exacerbating the condition, and current management.[15]
- Note signs of fever, headaches, abdominal pain or other symptoms that are not characteristic with uncomplicated nausea and vomiting in pregnancy.[12]
- Exclude other medical conditions causing nausea and vomiting e.g. gastro-intestinal, renal or endocrine[15]

Clinical Assessment

- Perform urinalysis including assessment of ketones, pH, and signs of urine infection such as nitrates, blood and protein.
- Maternal assessment for signs of dehydration.
- Perform a blood pressure.
- Perform temperature, pulse, and respirations if the medical history indicates risk for infection.
- If a women presents with a history of nausea and vomiting which is more than normally expected in pregnancy, perform a baseline weight (if not available). Perform a weekly weight until the nausea and vomiting resolves.[16]
- Consider performing full blood picture, urea and electrolytes, liver function tests, and thyroid function tests if clinical picture merits further investigation.[17]

Non-pharmacological Interventions

- Educate women:
  - Reassure: That early pregnancy nausea/vomiting is common, not refined to mornings, usually resolves spontaneously by 16-20 weeks and is not generally associated with poor pregnancy outcomes.[14]

  - To reduce potential oral health effects: Advise women to wait >1hour after vomiting before brushing teeth or rinse mouth with a solution of bicarbonate of soda; use fluoridated mouthwash / toothpaste; eat small amounts of nutritious protein rich snacks and avoid sweets/ carbonated soft drinks; and to chew sugar-free gum after meals/ sugary/ acidic drinks.[14]
- Small, frequent meals and snacks[2, 14, 16, 18, 19]
- Bland[2], low fat[19], low carbohydrate, high protein diet[14, 18]
- Take more liquids than solids in the diet[19]
- Encourage fluids[14] to prevent dehydration[2] – a least 2 litre/day[20]
- Avoid an empty stomach[16, 20]; prevent a full stomach e.g. mixing solids with liquid[20]
- Avoid rich, spicy or fatty foods (including smelling and cooking)[2, 14, 20]
- Eating dry crackers before rising in the morning
- Ice chips[2] or icy poles may be beneficial
- Consume a high-protein snack prior to going to bed[16]
- Ginger (*Zingiber officinale)* extract may provide benefit for management of nausea and vomiting in some randomised studies[2, 12, 14, 19], however a Cochrane review found the results were inconsistent and limited.[13] Recommended dose: up to 250 mg every 6 hours[12, 14] (in 24 hours the dosage should not exceed 1 gm[7, 16]). Concomitant use of anticoagulants and ginger is not advised due to the theoretical risk of inhibiting platelet function.[19]
- P_6 acupressure may possibly provide some relief for some women[2, 17-19] although the effectiveness of acupressure and acustimulation of P_6 point has inconsistent and limited support. Acupuncture has no significant benefit.[13, 14]
- Getting plenty of rest[14]
- Travel sickness bands[14]
- Provide the woman with the KEMH brochure 'Morning Sickness. A Simple Guide to Ease Your Discomfort'.
- If relevant, see Clinical Guidelines: Gynaecology: Early Pregnancy Care: Hyperemesis Gravidarum: Management & Management in the Home
- See also patient resource: SOGC: Nausea & Vomiting During Pregnancy

Pharmacological treatment

Pharmacological treatment may be required if non-pharmacological methods are unsuccessful.

- Pyridoxine (vitamin B_6) has been shown in limited randomised studies to reduce symptoms of nausea and vomiting,[12, 13, 21] however there are concerns for toxicity at high doses.[14]
  Dosage: 25- 50 mg up to three times daily.[7] If a woman is taking a multivitamin containing vitamin B_6 then the dosage is adjusted accordingly.

Doxylamine dosage recommended: 12.5 mg each morning, 12.5 mg in the afternoon, and 25 mg at night.[12]

- If the above treatment is ineffective, use of Phenothiazines (e.g. promethazine *preg. cat. C*; and prochlorperazine *preg. cat. C*),may be initiated.Metoclopramide (*preg. cat. A*) or ondansetron (*preg. cat. B1*) may also be initiated.[7, 12] These treatments (and intravenous hydration) are used if symptoms are prolonged and intractable i.e. for hyperemesis gravidarum.[7, 14] Phenothiazine's have been shown to reduce nausea and vomiting compared to placebo, and the majority of evidence suggests no association with birth defects.[14] In early pregnancy, certainty of safety and efficacy is not possible, and prescribed treatment is usually not indicated unless severe debilitating symptoms.[14]
- Iron therapy may need to be temporarily stopped until nausea settles.[14, 17] If iron containing multivitamins are discontinued, ensure adequate folate and iodine intake.[14]

VAGINAL DISCHARGE

High levels of oestrogen in pregnancy result in increased thick, white vaginal discharge (leucorrhoea)[3] from marked shedding of superficial mucosal cells in the vagina. With the higher levels of oestrogen, the normal bacteria (*lactobacillus acidophilus*) in the vagina increase activity, lactic acid by-products, and vaginal acidity, which provides some protection against pathogens,[3] but increases risk for *Candida albicans* and *Trichomonas vaginalis.*[22]

MANAGEMENT

- Women should be advised of normal physiological vaginal discharge changes in pregnancy, and instructed to inform health professionals of any abnormalities.
- Obtain vaginal and/or cervical swabs for laboratory testing as required.[5] If vaginal thrush present on swabs, topical vaginal imidazole medications (e.g. clotrimazole) can be used.[5]
  Note: Oral fluconazole medications *(preg. cat. D)* are not recommended in pregnancy.[5]
- See also Clinical Guidelines:
  - Obstetrics & Gynaecology: Obstetric & Gynaecological Infections: Vaginal Infections: Antibiotic Treatment for
  - Gynaecology: Sexually Transmitted Infections: Vaginal Discharges.

PELVIC GIRDLE AND LOW BACK PAIN

Many women (45-50%) experience pregnancy-related low back (PLBP) or pelvic girdle pain (PGP), with more than 80% of these women experiencing difficulties with daily living, and up to 30% requiring bed rest and leading to absence from work.[23]

PGP refers to pain in the symphysis pubis and/or pain in the region of one or both of the sacroiliac joints, and pain in the gluteal region.[24] Pain is often aggravated during standing, walking, sitting[23], twisting, climbing of stairs, and turning while in bed[23]. The pain with PGP is intermittent, there is no restriction of lumbar spine or hip movement, and it is often described as a stabbing, burning, dull, or shooting pain.[24]

PLBP however, is characterised by lumber region pain, is dull, and women experience it during forward flexion.

MANAGEMENT

- Refer women for physiotherapy consultation.[25] At KEMH, a walk-in (no appointment required) clinic is available Monday to Friday 11am-12pm for women booked to birth at KEMH who have a Medicare card. Further appointments (if required) will need to be booked in advance.
- Reassure women that most PGP resolves in a few weeks or within the month following delivery, however in 8-10% of women pain can be experienced for 1-2 years.[24] Extra support and postnatal physiotherapy may be required.[3]
- Conduct a medical history and physical examination to exclude other pain causes e.g. trauma, fevers, neurological symptoms, inflammatory signs or tenderness.[24]
- In labour- be sensitive of analgesia requirements, beneficial positioning (e.g. upright, kneeling) and of reducing hip abduction, during vaginal examinations and if lithotomy required, to avoid further compounding pain.[3]
- Education and management for women with PGP or PLBP includes:
  - avoidance of fatigue and have frequent periods of rest[3, 24]
  - avoiding situations that aggravate the condition[3] e.g. unrelenting postures, twisting while lifting, activities such as unequal weight bearing, bouncing, hip abduction,[3, 24] high-heel shoes[26]
  - using pillows to support the abdomen while lying in the lateral position, and to support the lower back when sitting, and placement of a lumbar roll behind the back with the feet slightly elevated.[24]
  - use of massage and local applications of heat[3] and cold may provide relief[24]
  - hydrotherapy may be useful in decreasing back pain,[24] and water aerobics[3]
  - a supportive pregnancy belt may be beneficial,[3] or if required, using aids such as crutches[3], walking frames and wheelchairs to assist mobility.[24]
  - exercising before and during pregnancy strengthens abdominal, back and pelvic muscles, assisting good posture and weight-bearing activities.[3]

CARPAL TUNNEL SYNDROME

Carpal tunnel syndrome (CTS) in pregnancy usually presents in the second or third trimester and is caused by excess fluid compressing the median nerve in the wrist. This causes paraesthesias, swelling and pain in the hand(s), and impairs sensory and motor function of the hand.[6] Symptoms often are worst at night, and can be exacerbated by forceful activity and extreme wrist positions. In pregnancy hormonal changes, oedema, and generalised slowing down of nerve conduction (if a woman has gestational diabetes) have been linked to causing CTS.[27] Women who have pre-eclampsia, hypertension, excessive weight gain, and have oedema in pregnancy are at more risk for developing CTS. See also patient brochure Carpal Tunnel Syndrome.

MANAGEMENT

- Early treatment involves activity modification including:
  - avoiding positions of extreme flexion or extension[27]
  - avoiding prolonged exposure to vibration (e.g. driving, lawn mowing, use of power tools)[27] & repetitive actions or aggravating activities (e.g. typing)[28]
- Arrange physiotherapy referral if symptoms require further management.
  - wrist splinting may be initiated – a neutral position maximises carpel tunnel volume and decreases pressure on the median nerve. Splints are normally worn at night, however some women may find they need to wear them during the day as well.[28]
- Corticosteroid injections give temporary relief in 80% of patients. However, if the patient has diabetes it can cause transient serum glucose elevation for up to 5 days
- Inform women carpel tunnel symptoms normally resolve within 2 weeks of birth.[29]
- Surgical options are generally not recommended during pregnancy.[29]

LEG CRAMPS

Leg cramps and restless leg syndrome can occur at any time, but usually occur at night and may effect up to 30% -50% of pregnant women, especially in the third trimester.[30] In the majority of these women, cramps occur twice per week.[30] The cause of leg cramps in pregnancy remains unclear, although suggested reasons include metabolic disorders, inactivity or excessive activity, imbalances of electrolytes, vitamin deficiency or hyperactive lower motor neurons.[30] A Cochrane review found that there is currently no evidence on alternative therapies (massage, stretching, relaxation or heat), and insufficient evidence to determine whether any oral interventions (calcium, magnesium, vitamin B or C) are effective for leg cramps in pregnancy.[30] For some women, calcium[3], magnesium or vitamin B supplementation may be effective, but results are limited to small studies and are inconsistent.[30]

MANAGEMENT

- Perform a health history to exclude other causes of leg cramps such as:
  - electrolyte imbalances, dehydration, inactivity or excessive exercise[31]
  - musculoskeletal problems e.g. prolonged sitting, back injuries, strenuous exercise of lower limbs, flat feet[31]
  - endocrine conditions e.g. thyroid disease, diabetes[31]
  - renal damage leading to muscle cramping and weakness[31]
  - cardiovascular conditions e.g. history of deep vein thrombosis causing venous insufficiency[31]
  - neurological conditions e.g. multiple sclerosis, Huntington disease[31]
- Strategies for prevention or relief of cramps include:
  - during leg cramps – massage[3], walking, and stretching may help[6]
  - a warm bath prior to bedtime[32]
  - a balanced diet, calcium gluconate supplements,[3] drinking adequate fluids[32]
  - prophylactic night-time calf stretching[31]

Magnesium supplement dosage

Available medication at KEMH is in the form of MagMin® 500mg (magnesium aspartate) tablets which contain equivalent magnesium of 37.4mg (1.55 mmol magnesium).[7]
If required, higher dose Biomagnesium® (total equivalent magnesium is 300mg; 12.3mmol magnesium) is available. Max one tablet daily.

SLEEP DISTURBANCE[3]

A result of some of the above disorders (e.g. leg cramps, pelvic/back pain, reflux), anxiety, nocturia, and fetal activity is that sleep can be disturbed in pregnancy. Insomnia can be associated with hormonal and mechanical changes in pregnancy. Up to 90% of pregnant women report disturbed sleep. For some women, severe sleep disturbance and sleeping <6hours per night, has been associated with an increased risk of longer labours, caesarean birth (4.5-5.2 times more likely)[30] and postnatal depression.[3] However, sleep medications should be avoided.[3]
Interventions to reduce disruption include[3]:

- forming sleep/wake habits and modifying sleep environment
- avoiding caffeine and passive smoking
- relaxation techniques, massage, heat and support for lower back pain
- limiting fluids in the evening.

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National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice
Legislation -
Related Policies -
Other related documents – KEMH Clinical Guideline, Section:

- O&G: Patient Administration: Referrals: Dietician; Physiotherapy
- O&G: Obstetric & Gynaecological Infections: Vaginal Infections: Antibiotic Treatment for
- O&M: Antenatal Care: Constipation: Management During Pregnancy
- Gynaecology: Early Pregnancy Care: Hyperemesis Gravidarum: Management & Management in the Home
- Gynaecology: Sexually Transmitted Infections: Vaginal Discharges
- Pharmacy: A-Z Medications:Doxylamine; Metroclopramide; Ondansetron; Pyridoxine (vitamin B_6)

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