ACUTE ABDOMEN – MANAGEMENT IN PREGNANCY

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Prompt diagnosis and treatment of woman presenting with acute abdomen
- Close monitoring of maternal and fetal condition

2. PATIENT

- Pregnant woman

3. STAFF

- Obstetric
- Surgical
- Midwifery
- Theatre staff
- Anesthetic
- Radiology
- Neonatal staff

4. EQUIPMENT

- Resuscitation equipment
- IV Cannulation equipment
- Intravenous fluids
- Ultrasound
- Cardiotocograph (CTG) machine
- Disposable tape measure

5. CLINICAL PRACTICE

- Assess hemodynamic stability
- Activate RAPID RESPONSE criteria for immediate medical review if criteria met
    - If hemodynamically unstable:
        - Secure ABCDE's
        - Escalate to consultant on call
        - Insert x2 large bore IV cannulas
            - Collect urgent bloods for:
                - FBC, EUC, CRP, LFTs, Kleihauer Betke Test, Blood Group & Antibody Screen, Venous Blood Gas (for lactate) +/- Amylase/Lipase/Coagulation Profile/Urate (Depending on clinical situation)
        - Administer urgent fluid resuscitation, strict input/output monitoring
        - Consider blood transfusion (and inform blood bank if required)
        - Insert In-dwelling catheter to observe urine output (especially if concern for acute urinary retention)
        - Apply CTG to assess fetal wellbeing
        - Keep woman nil by mouth unless otherwise ordered by the medical team
        - Provide appropriate analgesia
        - Perform abdominal ultrasound (by obstetric registrar or consultant)
        - Obtain consultation from other specialties as necessary with an appropriate level of urgency (e.g. anaesthetics, POWH surgical team)
        - Discuss with consultant on call
        - Decision around need for immediate surgery

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- Record observations frequently whilst in the acute phase and escalate as indicated by the Standard Maternity Observation Chart (SMOC)
    - Temperature
    - Pulse
    - Blood pressure
    - Respiratory rate
    - 02 saturations
    - PV loss
    - Abdominal girth if appropriate
    - Uterine activity
    - Pain assessment
    - Neurological observations
- If haemodynamically stable
    - Obtain a detailed clinical history and physical examination
    - Appropriate analgesia
    - Apply CTG
        - If abdominal pain in the setting of abdominal trauma, this should be continued for at least 4 hours
        - Perform a Kleihauer-Betke Test in all cases of major trauma
    - Consider differential diagnosis as below
    - Obtain a Urine dipstick – protein, creatinine, glucosuria, nitrites and leukocytes
    - Collect bloods for FBC, EUC, CRP, LFTs, Blood Group & Antibody Screen (and other clinically appropriate tests should be ordered) +/- Amylase/Lipase/Coagulation Profile/Urate Level
    - Perform Venous Blood Gas for lactate –for acute abdominal ischaemia/sepsis
    - Consider need for Intravenous Fluids & Blood Products depending on clinical situation
    - Consider ECG, Ultrasound, X Ray, CT or MRI as clinically appropriate
    - Obtain consultation from other specialties as necessary with an appropriate level of urgency (e.g. anaesthetist, POWH surgical team)
- Record observations frequently whilst in the acute phase and escalate as indicated by the SMOC chart
    - Temperature
    - Pulse
    - Blood pressure
    - Respiratory rate
    - 02 saturations
    - PV loss
    - Abdominal girth if appropriate
    - Uterine activity
    - Pain assessment
    - Neurological observations

Manage conservatively - however if no improvement or there is a deterioration **in clinical condition, consider surgical exploration +/- intervention +/- delivery**

6. DOCUMENTATION

- Medical record

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7. EDUCATIONAL NOTES

- Acute abdomen refers to any serious acute intra-abdominal condition accompanied by pain, tenderness and muscular rigidity, for which emergency surgery may be required[7].
- The gravid uterus can displace adjacent viscera and stretch the abdominal wall. This can alter classical clinical findings. Physiological changes such as leukocytosis and other biochemical parameters can interfere with the interpretation of laboratory results[1,8].
- Etiology of Acute Abdominal Pain[1,2]
    1. Obstetric (pregnancy related causes)
    2. Non-obstetric (non-pregnancy related causes)
    3. Extra-abdominal causes
    4. Causes exacerbated by pregnancy

Obstetric Causes:

(a) EARLY PREGNANCY[3]
- Miscarriage
- Ectopic pregnancy
- Molar pregnancy
- Ovarian cyst – torsion, hemorrhage, rupture
- Degeneration of uterine fibroids
- Round ligament pain

(b) LATE PREGNANCY[3]
- Placental abruption
- Acute fatty Liver
- Abdominal pregnancy
- HELLP (Hemolysis, Elevated Liver enzymes, Low Platelets count) syndrome
- Fibroid degeneration
- Fallopian tube torsion
- Uterine torsion
- Ruptured rectus muscle
- Polyhydramnios
- Symphysis diastasis
- Intraperitoneal bleed

Non-Obstetric Causes:

(a) SURGICAL[2]
- Appendicitis
- Cholecystitis
- Biliary colic
- Acute pancreatitis
- Peptic ulcer
- Urolithiasis
- Intestinal obstruction
- IBD (inflammatory bowel disease)
- Ruptured aneurysm (splenic artery and other vessels)
- Trauma

(b) MEDICAL[5]
- Gastroenteritis
- Porphyria
- Sickle cell crisis
- DVT (Deep Vein Thrombosis)
- Acute urinary retention

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Exacerbated by Pregnancy:

- GORD (Gastro-Oesophageal Reflux Disease)
- Gallbladder disease
- Acute cystitis
- Acute pyelonephritis
- Musculoskeletal pain

Extra-abdominal etiology [7]:

- Cardiac pain
- NSAP (nonspecific abdominal pain)
- Pleuritic pain
- Psychological drug abuse or withdrawal
- Herpes Zoster infection

- Ultrasonography is the first imaging modality of choice. MRI without gadolinium can be considered as the second line of imaging [9].
- If indicated, and in consultation with radiologist – X Ray and CT Scans with shielding can be performed safely without significant risk of fetal harm after appropriate counselling[8].
- Management of the acute abdomen in pregnancy requires a multidisciplinary approach involving Obstetrician, Surgeon, Radiologist, Anesthetist, Neonatologist and Midwifery Staff.

8. RELATED POLICIES/ PROCEDURES

- Fetal Heart Rate Monitoring – Maternity – MoH GL2018/025
- Midwifery Assessment and/or Admission
- Trauma during pregnancy
- Sepsis in Pregnancy and Postpartum
- Antepartum Haemorrhage (APH)
- Pre-eclampsia - Intrapartum Care
- CERS Management of Deteriorating Adult and Maternity Inpatient

9. RISK RATING

- Medium

10. NATIONAL STANDARD

- Standard 5 - Comprehensive Care

11. REFERENCES

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