

A blurred background image of a pregnant woman wearing a blue long-sleeved shirt, holding her belly with both hands. The image is out of focus, emphasizing the text overlay.

ACUTE ABDOMEN IN PREGNANCY – NON OBSTETRIC CAUSE

Approach

- **Detailed history** – onset - sudden violent pain in GIT perforation, ureterolith, mesenteric artery embolism, duration, intensity and character of pain, associated symptoms, fever, relieving and aggravating factor,
- **peritoneal signs absent**, examination in left or right decubitus displacing the gravid uterus,
- **Site of pain**- position of the appendix shifts upwards and to right with the progress of gestation mimic acute cholecystitis
- **BS** absence panperitonitis.
- **Blood tests** Leukocytosis, increase in Neutrophil >80%, CRP Coagulation profile, LFT.
- **fetal viability** and evaluation, non reassuring indicates obstetric cause. Uterine contractions

Approach

- **Order and perform appropriate investigations**
- **Diagnostic imaging:** USG first line remains the primary imaging investigation, also helps in the fetal evaluation but limitations – operator dependency, altered body habitus, gravid uterus , a small field of view, negative study may delay the diagnosis
- **MRI**- versatile, powerful, more diagnostic (sensitivity of 100% and specificity 94% in the diagnosis of appendicitis), but not recommended in the first trimester
- **Radiography** : single exposure does not result in harmful fetal effect . Exposure less than 0.05Gy has not been associated with increase in fetal anomaly.
- **CT** – ionizing radiation and need of contrast limits use in pregnancy.
- *Non Obstetric causes and presentation of Acute Abdomen among the Pregnant Women. Monoarul Haque , M Phil et al Journal of family and Rep Health.*
- *Acute abdomen and abdominal pain in pregnancy . Current Obst and Gyneac. Nair U.2005:15:359-67*

LAPAROSCOPY PREFERRED OVER LAPAROTOMY

- Laparoscopy feasible, a safe approach to diagnosis and management, use of analgesic is less, early ambulation decreases the risk of thromboembolism
- Indication of laparoscopy is same as in non pregnant women
- Potential concerns were- injuring the gravid uterus leading to PROM /PTL, trocar and veress can directly injure the fetus, Open Hasson Technique or optic port preferred,
- Pneumoperitoneum induced rise in intra-abdominal pressure may induce fetal hypoxia and decreased uteroplacental blood flow, thus left lateral positioning of the pt, Absorption of CO₂ lead to fetal acidosis, keep insufflation pressure 10-12mmHg. Follow arterial blood gases. Keep end tidal CO₂ below 35mmHg by hyperventilation of mother.
- Fear of teratogenicity in 1st trimester and difficult ergonomics in 3rd trimester optimal time to operate is 2nd trimester but in the event of direct threat to mother and fetus surgical intervention done regardless of GA.
- Thromboprophylaxis, pneumatic compression also indicated

- Jackson H et al, Diagnosis and laproscopic treatemtn of surgical diseases during pregnancy: an evidence –bases review, Surg Endosc. 2008 Sep 22(9) : 1917-27

Take home message

- Acute abdomen of non obstetric causes is accompanied by high incidence of poor fetal outcome and maternal morbidity
- Delay in the surgical intervention, together with operative maneuvers cause poor outcome
- Fear of complications, negative laparoscopy makes physician to go for conservative treatment, ironically the delay carries high risk to mother and fetus.
- The perinatal outcome ($p<0.02$) and maternal morbidity ($p<0.05$) was better in those who underwent surgery
- Tocolysis has no benefit
- Multidisciplinary approach
- Go for aggressive surgical intervention than operating on a moribund pt and endangering life of mother and fetus
- Early laparoscopy shortens the hospital stay and improves the fetal and maternal outcome
- Thus precise diagnosis of the acute abdomen in pregnant women by continual updating of abdominal assessment , knowledge and clinical skills is necessary in the management of abdominal pain in obstetric setting to prevent maternal morbidity and mortality