Evaluation of Abdominal Pain in Pregnancy

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Case Study

- 32 year old caucasian female patient
- Gravida 1 Para 0
- 34 weeks into pregnancy
- Pregnancy uneventful to date
- No relevant past medical history
- No previous surgery
Case Study

1st July 2011

• Admitted to Antenatal Ward with Generalised Colicky Abdominal Pain for 6 hours
  – Pulse 95, BP normal, Temperature 37.5
  – Abdomen: Tender Tense Lower Uterus
  – Bloods: WCC 17, CRP 80, Lactic Acidosis
  – Fetal CTG: Evidence of Fetal Distress
Case Study

1st July 2011

• Assessed by Obstetric Team
  – Emergency Caesarian Section
    • Pfannensteil Incision
    • Safe Delivery of Baby
    • No Cause for Fetal Distress seen
    • Baby Transferred to SCBU
    • Mother To Antenatal Ward
Case Study

2\textsuperscript{nd} July 2011

- Baby making good progress
- Mother still c/o abdominal pain
  - Tachycardia 95, BP 95/65, temperature 38
  - Assessed by Obstetric Registrar
    - Considered hypovolaemic and pain due to C-Section
    - Fluid Resuscitation
    - Morphine PCA
Case Study

3rd July 2011

- Condition Deteriorated Overnight
  - Abdominal Pain Requiring High Morphine Doses
  - Abdomen Tender but no Peritonitis
  - Oliguria <20 mls/hour
  - Pulse 115, BP 80/55, Temp 38
  - Hb 11.5, Platelets 70, WCC 21, CRP 124
  - Severe Lactic Acidosis
Case Study

3rd July 2011
• Transfer to ITU
• Intensive Resuscitation – CVP, Arterial Lines
• Ionotropiс Support of BP

Surgical Opinion Called For
3rd July 2011

- Surgical Opinion
- Patient in Severe Lactic Acidosis 48 hour after admission with abdominal pain and fetal distress
- Abdominal Pain still severe
- Now Anuric and Developing DIC
- Abdominal Examination: Generalised Peritonitis
Case Study

3rd July 2011 - Laparotomy

- Findings
  - 3 Liters Faeculent Free Fluid
  - Knot of Gangrenous Small Bowel with Necrotic Perforation

- Procedure
  - Necrotic Small Bowel Resected
  - End RIF Ileostomy and Mucous Fistula
Aetiology

Congenital Band Adhesion
Evaluation of Abdominal Pain in Pregnancy

- Is the Pain Obstetric or Non-Obstetric?
- Is Surgery Indicated?
- What are the Risks of GA?
- Are any Investigations Indicated?
  - Will Pregnancy Effect Result?
  - What is the Risk of Investigation?
Causes - Obstetric

1<sup>st</sup> Trimester:  Ectopic Pregnancy

2<sup>nd</sup> Trimester:  Red Degeneration of Fibroid
Pre eclampsia, HELLP Syndrome
Placental Abruption

3<sup>rd</sup> Trimester:  Branxton Hicks
Round Ligament pain
Torsion of pedunculated Fibroid
Placental Abruption
# Causes – Non Obstetric

## Incidental to Pregnancy
- Acute appendicitis
- Peptic ulcer
- Gastroenteritis
- Incarcerated Hernia
- Ovarian cyst rupture
- Adnexal torsion
- Renal Colic

## Associated with Pregnancy
- GORD
- Acute cholecystitis
- Gallstone Pancreatitis
- Acute pyelonephritis
- Acute cystitis
- Urinary Retention
- Rupture of rectus abdominus muscle
Appendicitis in Pregnancy

• Position changes during Gestation
• Rotation relative to Caecum
• Increased Systemic Steroids
• Limited Omental Migration
• Increased Risk of Visceral Perforation

• 35% Risk of Preterm Labour if Perforation
Non-Obstetric Surgery in Pregnancy

Safety and timing of nonobstetric abdominal surgery in pregnancy.
Investigation - Heamatological

- **Heamoglobin**  Heamodilution to 11.5 g/dl
- **WCC**  Increase from $7.0 \times 10^9$/L to $15.0 \times 10^9$/L
- **Platelets**  Decrease from 280,000 /µL to 260,000 /µL
  - Thrombocytopenia, or a low blood platelet count, is encountered in 7-8% of all pregnancies.

- **ESR**  $= \text{age} + 10 / 2$
  - Slightly raised in pregnancy

- **CRP in pregnancy**
  - $>25$ in 1$^{\text{st}}$ trimester assoc with low birth rate and preterm delivery
  - CRP is not raised in normal pregnancy
Investigation - Radiological

Risk to fetus by Investigation

- Ultrasound – No Risk
- Ionising Radiation
  - > 10 Rads can cause learning disabilities or eye problems
  - Abdo X-Ray = 290 millirads
  - CT Abdo = 800 millirads
- MRI – No Risk
Anaesthesia during Pregnancy

**Priority: Uteroplacental Perfusion**

*Prevent foetal hypoxia and acidosis*

*Maintenance of Stable Maternal Perfusion and Oxygenation*

General or Regional Anaesthetic?

Risk of Aspiration

Peripheral Vasodilation

Positioning to avoid IVC compression

**Balance risk of intervention versus risk of no intervention**
## Risk of Laparoscopy

### Advantages
- Less Postoperative Pain
- Shorter Recovery Time
- Decreased DVT Risk
- Better Visualisation

### Disadvantages
- Uterine Injury
- Hypercapnia
- Decreased Venous Return

### Precautions
- Pneumatic Stockings
- Lower Intrabdominal Pressure <12mmHg
  - Caution with Changing Position
- Open Trochar Insertion
Summary

• Risks of Anaesthesia / Surgery are Low and should not be Overestimated

• Balance Risks of Intervention vs No Intervention

• Consider Uteroplacental Perfusion at all times

• Laparoscopic Surgery is not Contraindicated

• Close Communication Essential