Tubo-Ovarian Abscess in a Post-Partum Patient with Subsequent Sepsis

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Transformation: Making Waves

Case Description

- A 22-year-old female presented to the emergency department of a peripheral hospital at 6 weeks post partum with generalized abdominal pain which was refractory to simple analgesia. She had associated headaches, rigors and sweats. On examination, she was tachycardic (HR 118), febrile (38.3ºC) and had low SpO2 (94% RA) and was tender to palpation in the LLQ and LUQ.

- The patient was initially treated with a combination of ceftriaxone, gentamicin, ciprofloxacin and metronidazole however symptoms did not improve. In light of this, the patient was transferred to a large tertiary referral hospital and the decision was made to go to theatre for Laparoscopic salpingectomy +/- oophorectomy.

- Laparoscopy revealed a normal sized uterus adhered to bowel and right tube and ovary posteriorly. Adhesiolysis was performed. There was also a Right sided hyperaemic tubo-ovarian abscess with purulent discharge. (Fig 1) Peritoneal washings were sent for culture and sensitivity, which ultimately grew *E.Coli*. Right salpingectomy was done for pyosalpinx. Both ovaries conserved.

- Patient then re-presents 4 days later with temperature (38.5ºC) and mild tenderness in the suprapubic region. WCC continued to rise (18.4, from 17.6) and CRP 214 (from 200). CT Abdomen Pelvis revealed a multiloculated collection. Decision made to take back to theatre for repeat drainage and washout which revealed dense inflammatory adhesions in pelvis with small bowel and colon involvement. (Fig 2)

- Despite two surgeries, CRP continued to rise CRP 325 -> 486- 576 and WBC 17.4 -> 24.3 and repeat CT abdomen pelvis revealed disproportionately increased free gas in peritoneum, suggesting hollow viscous perforation. Patient taken back to theatre for the third time for resection of caecum and ileum, small bowel repair, and end ileostomy.

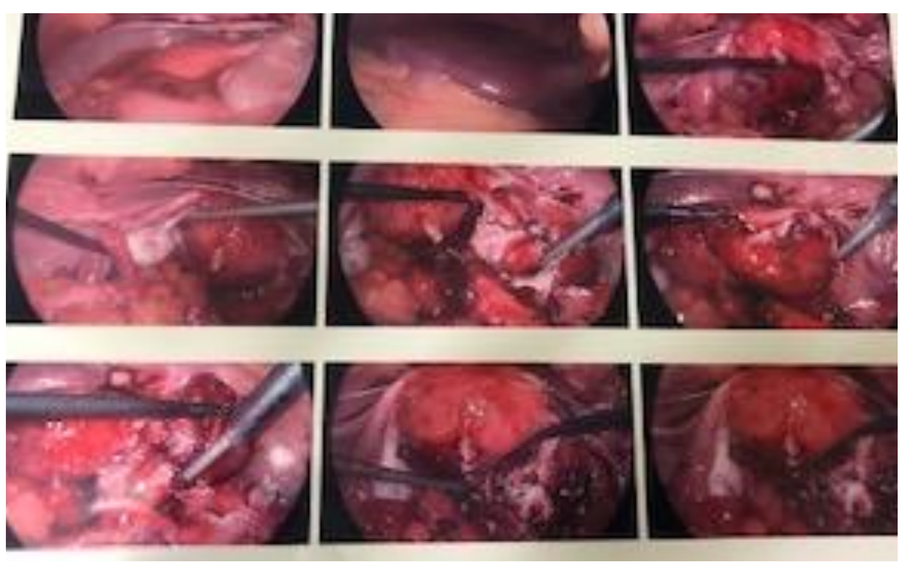

Fig 1: Intraoperative findings from first surgery which revealed Uterus normal size adhered to bowel and right tube and ovary posteriorly. Right sided matter and hyperaemic tubo-ovarian abscess , purulent discharge. Left tube and ovary normal

Introduction

Tubo-ovarian abscess (TOA) is a rare condition in the post partum and pregnancy period due to the cervical mucous plug and amniotic membranes that protect from ascending infection.[1]

There have been multiple risk factors identified such as use of assisted reproductive technology and history of endometriosis and/or endometrioma.[1,2]

The most common cause of TOA in the post-partum population is Group A Streptococcus but can also commonly include Escherichia Coli and Group B Streptococcus. [3]

Identification of the septic obstetric patient

The Obstetrically Modified Single Organ Failure Assessment (om-SOFA) is a classification system that utilizes degree of organ dysfunction as a predictor of patient mortality. [X]

The om-SOFA involves parameters including creatinine, mean arterial pressure and mentation.[4] (Table 1)

System Parameter	Score		
	0	**1**	**2**
Respiration PaO_2/FIO_2	≥400	300 - <400	<300
Coagulation Platelets,x10^6/L	≥150	100-150	<100
Liver Bilirubin (µmol/L)	≤20	20-32	>32
Cardiovascular Mean Arterial Pressure(mm Hg)	MAP≥70	MAP<70	Vasopressors required
Central Nervous System	Alert	Rousable by voice	Rousable by pain
Renal Creatinine (µmol/L)	≤90	90-120	>120

Parameter	Score	
	0	1
Systolic Blood Pressure	>100mmHg	≤100mmHg
Respiratory Rate	<22/min	≥22/min
Altered mentation	Alert	Altered mentation

Table 1: The Obstetrically Modified Single Organ Failure Assessment (omSOFA) tool

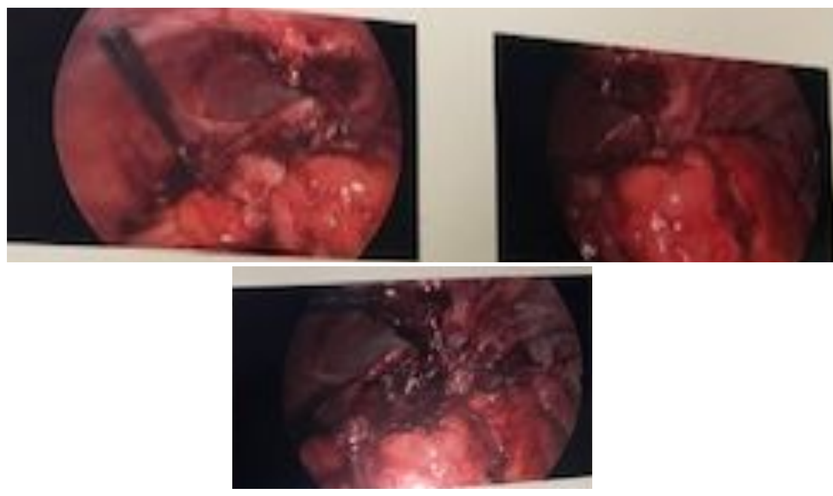

Fig 2. intraoperative findings from second surgery revealing Dense inflammatory adhesions in pelvis with small bowel and colon forming part of the abscess cavity wall.

Management of the septic obstetric patient

1. Recognize sepsis

- Using the om-SOFA score
- If Score >2 then involve senior obstetrician or physician

2. Resuscitate

- DRSABCD
- Commence investigations (FBC, EUC, CRP, Coags, LFT, Blood culture +/- ABG)
- Commence full septic workup including vaginal swab, urine, sputum and stool MCS

3. Respond

- Administer IV antibiotics following local guideline
- Consider antipyretics if febrile AFTER antibiotics
- Administer IV crystalloid (aim SBP>90)

4. Reassess

- Repeat history and examination to elicit cause of sepsis
- Re-calculate omSOFA
- Are there any signs of deterioration?
  - SBP <90
  - RR >25
  - Evidence of renal dysfunction

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