CASE 3

Short case number: 3_18_3
Category: Endocrine & Reproductive Symptoms
Discipline: Obstetrics & Gynaecology
Setting: Emergency Department
Topic: Acute Pelvic Pain-Benign Ovarian Disease.

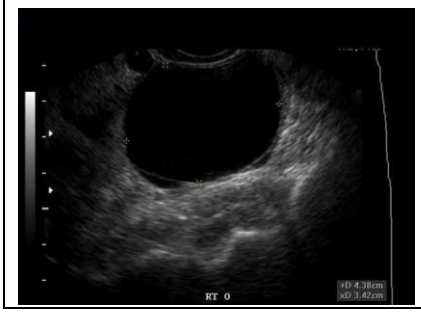
Case

Bella Cheng is19 year's old, she presents with sudden onset of severe pelvic pain. On arrival in the ED she appears pale. Her boyfriend Dale informs you that they had just finished dinner and were watching a movie, when Bella grabbed her stomach and doubled over with pain. He has never seen her in so much pain before.
She has not been unwell.

Observation. Distressed due to the pain, Pale.
Afebrile, BP 120/70, PR 90 bpm. RR 20/min.

Questions

1. What are the key features of your history and examination of Bella?
2. What are the important gynaecological and non-gynaecological causes to consider with Bella's presentation?
3. What investigations would you undertake in the assessment of Bella? How would the results influence your differential diagnosis and management?



4. Pelvis ultrasound demonstrates a simple cyst in Bella's right ovary with evidence of fluid in the pouch of Douglas. What are physiological ovarian cysts? How do they differ from other cysts or benign tumours of the ovary?
5. Bella's pain has now settled with analgesia and she is feeling much better. Outline your management plan for her, including writing a discharge letter for her GP.

Suggested reading:

1. Abbott, J., Bowyer, L., & Finn, M. (2014). *Obstetrics and Gynaecology: an evidence-based guide (2nd ed).* Australia, Elsevier.
2. Edmonds KD. Benign diseases of the vagina, cervix and ovary. Chapter 53 in Dewhurst's Textbook of Obstetrics & Gynaecology, Edmonds K [editor]. Blackwell Publishing. 2007. Pg 611-612
3. Colledge, N.R., Walker, B.R., Ralston, S.H, & Penman, I.D. (eds). *Davidson's Principles and Practice of Medicine* (22nd ed). Churchill Livingston, Philadelphia. 2014

ANSWERS

1. What are the key features of your history and examination of Bella?

Important factors in the assessment of abdominal pain

- Duration
- Site and radiation
- Severity
- Precipitating and relieving factors (food, drugs, alcohol, posture, movement, defaecation)
- Nature (colicky, constant, sharp or dull, wakes patient at night)
- Pattern (intermittent or continuous)
- Associated features (vomiting, dyspepsia, altered bowel habit)

Important parts of the gynaecological history

- Menses: Current cycle, LMP, abnormal bleeding
- Pain: dysmenorrhoea, dyspareunia, pelvic pain
- Pregnancies: number, outcome, complications
- Contraception
- Sexual History: Current partner, change in partner is last 6 months, vaginal discharge, STI

Key features in examination

- Symptoms and signs of peritonitis
- Abdominal examination: Inspection, palpation, percussion, auscultation
- Pelvic examination: tenderness, appearance of vaginal discharge

2. What are the important gynaecological and non-gynaecological causes to consider with Bella's presentation?

Inflammation

- Pelvic Inflammatory Disease
- Appendicitis
- Diverticulitis
- Cholecystitis
- Pancreatitis
- Pyelonephritis
- Intra-abdominal abscess

Perforation/rupture

- Ectopic pregnancy
- Ovarian cyst (rupture or leaking, torsion, infection, haemorrhage into a physiological luteal cyst)
- Peptic ulcer
- Diverticular disease
- Aortic aneurysm

Obstruction

- Intestinal obstruction
- Biliary colic
- Ureteric colic

Retroperitoneal

- Aortic aneurysm
- Malignancy
- Lymphadenopathy
- Abscess

Psychogenic

- Depression
- Anxiety
- Hypochondriasis
- Somatisation

Locomotor

- Vertebral compression with referred pain
- Abdominal muscle strain

Metabolic/endocrine

- Diabetes mellitus
- Addison's disease
- Acute intermittent porphyria
- Hypercalcaemia

Drugs/toxins

- Corticosteroids
- Azathioprine
- Lead
- Alcohol

Haematological

- Sickle-cell disease
- Haemolytic disorders

Neurological

- Spinal cord lesions
- Tabes dorsalis
- Radiculopathy
- Gastroenterology
- Irritable Bowel Syndrome
- Constipation

3. What investigations would you undertake in the assessment of Bella? How would the results influence your differential diagnosis and management?

Blood tests	FBC (raised WCC, low Hb)
	LFT
	EUC
	Amylase
Urine	MCS
	Quantitative Bhcg
Swabs	High vaginal: MCS, Chlamydia PCR, Gonorrhoea PCR
Imaging	Ultrasound will identify most ovarian cysts

	CT/MRI scanning may be useful if the nature of the lesions remains unclear (Consider erect CXR, abdominal X-ray, RUQ Ultrasound if other features)
Laparoscopy	Severe symptoms or clinical signs of shock is indicative of intraperitoneal pathology, such as bleeding and necessitates emergency laparoscopy or laparotomy

4. **Pelvic ultrasound demonstrates a simple cyst in Bella's right ovary with evidence of fluid in the pouch of Douglas. What are physiological ovarian cysts? How do they differ from other cysts or benign tumours of the ovary?**

   Physiological cysts are a common occurrence of the normal cyclical function of the ovary. They may be follicular, theca lutein or corpus luteum in origin. Prior to ovulation the ovarian follicle measures up to 3cm in diameter; a physiological cyst is by definition a unilocular cyst >3cm in diameter. Such cysts rarely become larger than 10cm. They are usually singular (unless following ovarian stimulating drugs or in the presence of trophoblastic disease)

   Physiological cysts are more common in users of progesterone-only contraceptives and around the time of menarche and perimenopause.

5. **Bella's pain has now settled with analgesia and she is feeling much better. Outline your management plan for her, including writing a discharge letter for her GP.**

   Uncomplicated physiological cysts resolve spontaneously within 8-12 weeks.

   Management plan
   Ensure adequate analgesia for discharge
   Repeat Ultrasound in 2- 3 cycles to ensure resolution
   Instructions for action if pain returns or becomes worse
   Consider opportunistic screening: cervical screening test, STI screen, ensure HPV vaccination complete

   GP letter should include:
   Summary of presentation
   Results of all investigations
   Plans for follow up and any further investigation