REFERRAL AND DISCUSSION CASE 2

BRIEFING

You are the **FY1 in ED** and you have clerked Mrs Smith, a 40-year old female who has presented with vomiting.

You have ordered an **abdominal x-ray**, which is available to view.

You are expected to refer the patient to the general surgery team over the telephone, covering the following:

- Summary of the case from the patient notes provided
- Systematic interpretation of the abdominal x-ray, including the likely diagnosis
- Appropriate further management of the patient

You should provide the specialist with the information they require.
This station will last 10 minutes.

POST-TAKE ROUND NOTES

University Hospitals of Leicester NHS Trust

Hospital: LRI Ward: ED

Consultant: Dr Davidson

Affix patient ID label

Hospital No.: H123456

Name: Mrs Adele Smith

ADULTS

PC - vomiting

HPC - 40 year old F with 2 day history of vomiting and sudden onset generalised abdominal pain that is not relieved by simple analgesia. She cannot eat and drink but was eating normally prior to this. She has not had these symptoms before although she has had some ongoing abdominal pain. She has not opened her bowels in the last 3 days. She is no longer sexually active and she has no recent travel history.

PMHx - migraines, Crohn's disease

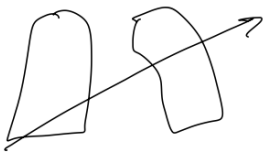
DHx - co-codamol, recently started azathioprine, NKDA

SHx - lives at home with husband and 2 children, non smoker, non drinker

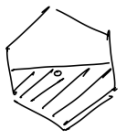
FHx - nil

O/E - warm peripheries, CRT >2 seconds

Cardiorespiratory exam: HS I+II+0



Abdomen exam:



Calves: SNT, no peripheral oedema

Dr Sampson
FY1
GMC 622167

Tick box to ensure appropriate items reviewed
(put N/A if necessary)

Date completed: 08/11/23

VTE		Antimicrobials		Nutritional status		Maximum level of care	
Drug chart		EWS		EDD documented		Dementia screen >75yrs	
Blood results		IV lines		DNA-CPR status		Diabetes monitoring chart	
Imaging reports		Catheter		Sepsis screen			

W107

NEWS key 0 1 2 3

FULL NAME MRS ADELE SMITH

DATE OF BIRTH 01/01/1984 **DATE OF ADMISSION** 08/11/23

Parameter	Range	08/11	Score	Range
	DATE	08/11		DATE
	TIME	8AM		TIME
A+B Respirations Breaths/min	≥25		3	≥25
	21–24	23	2	21–24
	18–20			18–20
	15–17			15–17
	12–14			12–14
	9–11		1	9–11
	≤8		3	≤8
A+B SpO₂ Scale 1 Oxygen saturation (%)	≥96			≥96
	94–95		1	94–95
	92–93		2	92–93
	≤91	91	3	≤91
SpO₂ Scale 2† Oxygen saturation (%) Use Scale 2 if target range is 88–92%, eg in hypercapnic respiratory failure. †ONLY use Scale 2 under the direction of a qualified clinician	≥97 on O_2		3	≥97 on O_2
	95–96 on O_2		2	95–96 on O_2
	93–94 on O_2		1	93–94 on O_2
	≥93 on air			≥93 on air
	88–92			88–92
	86–87		1	86–87
	84–85		2	84–85
	≤83%		3	≤83%
Air or oxygen?	A=Air	A		A=Air
	O_2 L/min		2	O_2 L/min
	Device			Device
C Blood pressure mmHg Score uses systolic BP only	≥220		3	≥220
	201–219			201–219
	181–200			181–200
	161–180			161–180
	141–160			141–160
	121–140			121–140
	111–120			111–120
	101–110		1	101–110
	91–100	95	2	91–100
	81–90		3	81–90
	71–80		3	71–80
	61–70		3	61–70
	51–60		3	51–60
	≤50		3	≤50
C Pulse Beats/min	≥131		3	≥131
	121–130		2	121–130
	111–120		2	111–120
	101–110	110	1	101–110
	91–100		1	91–100
	81–90			81–90
	71–80			71–80
	61–70			61–70
	51–60			51–60
	41–50		1	41–50
	31–40		3	31–40
	≤30		3	≤30
D Consciousness Score for NEW onset of confusion (no score if chronic)	Alert	A		Alert
	Confusion		3	Confusion
	V		3	V
	P		3	P
	U		3	U
E Temperature °C	≥39.1°		2	≥39.1°
	38.1–39.0°	38.1	1	38.1–39.0°
	37.1–38.0°			37.1–38.0°
	36.1–37.0°			36.1–37.0°
	35.1–36.0°		1	35.1–36.0°
	≤35.0°		3	≤35.0°
NEWS TOTAL		9		TOTAL
	Monitoring frequency			Monitoring
	Escalation of care Y/N			Escalation
	Initials			Initials

BLOODS

WCC	12.8x10^9/L
Neutrophils	8.5x10^9/L
Eosinophils	0.09x10^9/L
Lymphocytes	1.3x10^9/L
Monocytes	0.5x10^9/L
Basophils	0.03x10^9/L
Platelets	420x10^9/L
Hb	12.0 g/dL

Na+	135
K+	3.4
Cl-	104
Creatinine	130
Urea	15
eGFR	80

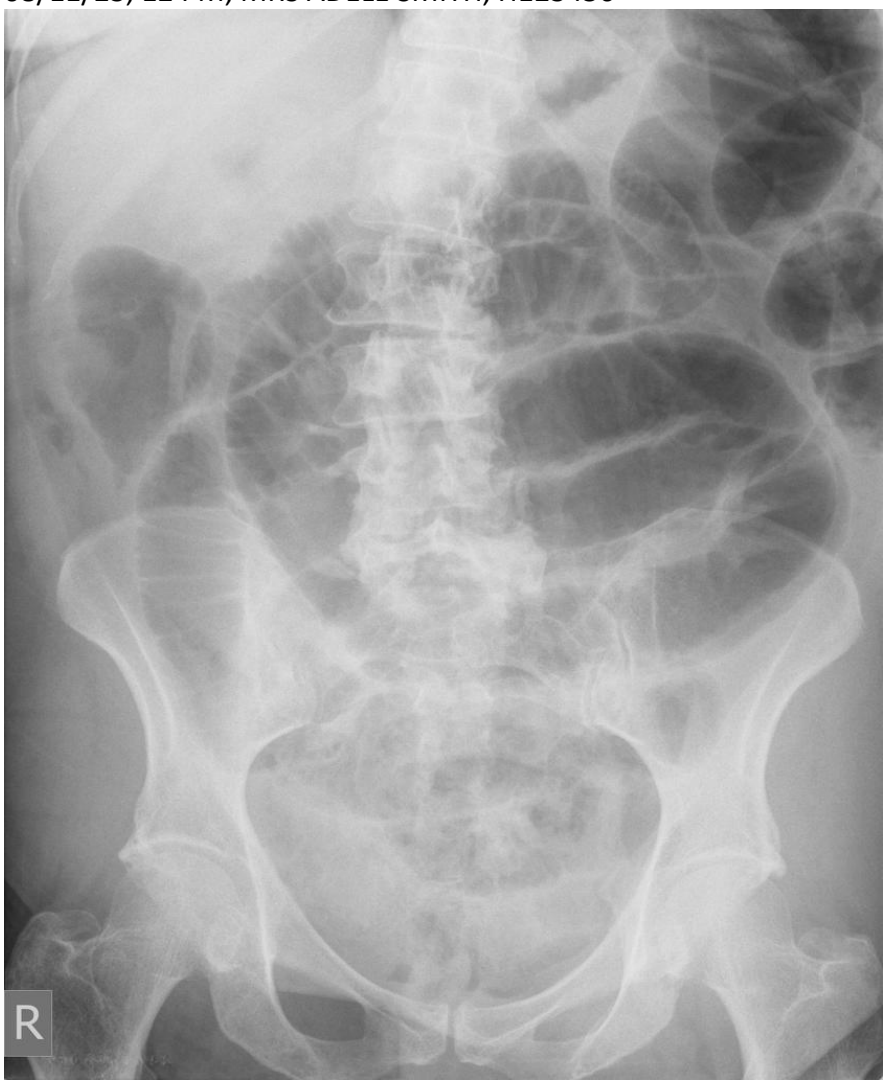
ALT	18 IU/L
AST	9 IU/L
Albumin	38 g/L
ALP	48 IU/L
Troponin	18 ng/ml
CRP	115

BLOOD GAS:

pH	7.25
paO2	11.3
paCO2	5.3 kPa
Na+	135
K+	3.4
HCO3-	18
Lactate	5.1

ABDOMINAL X-RAY

08/11/23, 12 PM, MRS ADELE SMITH, H123456



Follow-up questions

1. What are other causes of small bowel obstruction?
2. What features of the abdominal x-ray suggest this is small bowel as opposed to large bowel?
3. What investigations can demonstrate perforation in the abdomen?
4. Do you think this patient requires a CT abdomen and justify your reasoning?

MARK SCHEME

Example referral:

Hi, my name is x and I am an FY1 in ED. Am I speaking with the general surgical registrar? I would like to discuss a very unwell patient with you, her name is Mrs Adele Smith. Her hospital number is H123456.

She is a 40-year old female who I believe has sepsis secondary to a perforated, obstructed small bowel.

S - she has a 2-day history of vomiting and sudden-onset, 8/10 generalised abdominal pain. She has not opened her bowels for the past three days.

B – she is known to have Crohn's but has only recently started treatment with azathioprine. She has no other relevant past medical history.

A - she appears alert but drowsy, she has warm peripheries and a prolonged capillary refill time. On examination, her abdomen is mildly distended with guarding and rigidity as well as percussion tenderness, alongside absent bowel sounds. Her NEWS is 9 - she is haemodynamically unstable with pyrexia, her blood gas shows metabolic acidosis with a lactate of 5.1 and her bloods show raised infective/inflammatory markers. She also may be developing an AKI but a previous baseline creatinine would be useful. I have an abdominal x-ray, can I present this to you? (interpretation on next page)

R - thus, I would like to start the sepsis six and I would like to give appropriate analgesia. She will also need an NG tube due to the obstruction. Since she has perforated, I believe she requires an urgent laparotomy.

Abdominal x-ray interpretation

This is Mrs Smith's supine abdominal x-ray taken on 08/11/23 at 12PM.
It is a good quality film with adequate exposure.
Bowel - there are centrally placed, dilated loops of small bowel with evidence of rigler's sign.
Bone - No obvious bony pathology is identified.
Calcification – no abnormal calcification is identified either.
In summary, the abdominal x-ray shows small bowel obstruction with perforation.

Follow-up questions

1. What are other causes of small bowel obstruction?
Adhesions, strictures, malignancy, hernias.
2. What features of the abdominal x-ray suggest this is small bowel as opposed to large bowel?
The bowel loops are centrally located, the size of the bowel loops suggests small bowel obstruction and there are also visible valvulae conniventes.

OSCE Express – Sumedh Sridhar, Dr Nidhi Agarwal

3. What investigations can demonstrate perforation in the abdomen?
As well as an abdominal x-ray, an erect chest x-ray would show free air under the diaphragm. A CT abdomen is the most definitive investigation for perforation.
4. Do you think this patient requires a CT abdomen? Justify your reasoning
I don't think a CT abdomen is required in this setting given the clinical status of the patient as well as the abdominal x-ray. So, her clinical history and examination findings strongly suggest she is peritonitic, her observations demonstrate sepsis and her x-ray shows clear signs of pneumoperitoneum. Thus, I think she requires urgent surgical exploration and intervention.