

# **MMed and DCH Lectures**

## **Common Paediatric Problems**

July 26, 2021

Prof Trevor Duke

# 7-year-old boy with vomiting

- Previously well
- 3 days of vomiting and abdominal pain
- Constant pain in epigastric region
- Vomiting initially clear then brown / bilious vomits
- Bowels not opened for 3 days
- Decreased oral intake
- On examination, distended, tender abdomen, no bowel sounds, sunken eyes, poor urine output

# Differential diagnosis

# Differential diagnosis

- Gastroenteritis
- Perforated appendicitis
- Malrotation with volvulus
- Intussusception
- Pigbel

29/7/2013  
7 YEAR  
M

Abdomen Grid  
23/7/2021 1:15:49 AM  
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AR  
R  
SUPINE  
MOBILE

kVp: 70  
mAs: 12  
EI: 233

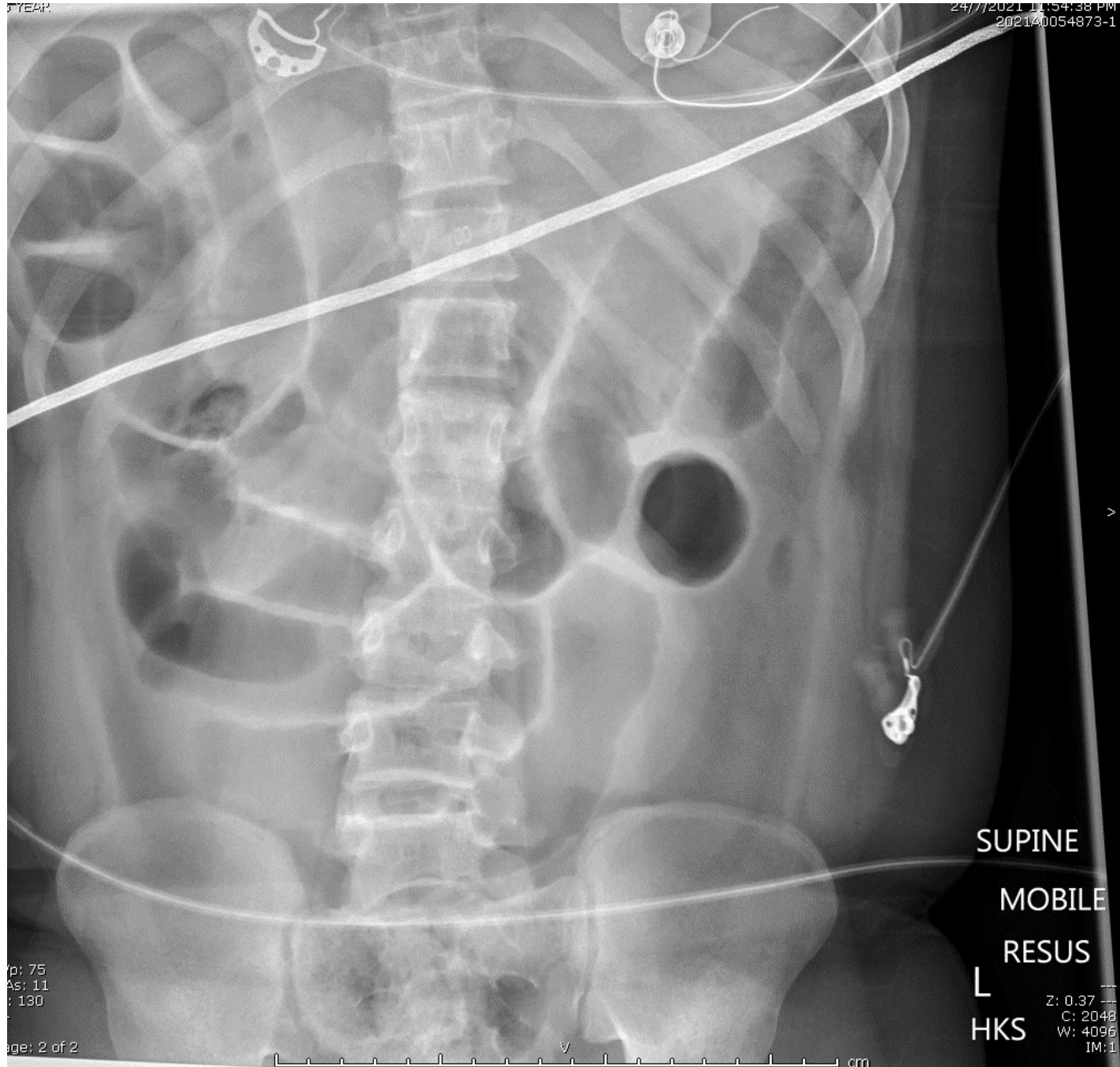
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- IV fluid rehydration
- Surgery
  - Infarcted small bowel last 190cm of ileum
  - Small bowel malrotation
  - Caecum and large bowel viable
  - Resection of dead gut and ileostomy (still 150cm of small bowel)
- Antibiotics: amoxicillin, gentamycin, metronidazole
- Parenteral nutrition

# 16-year-old boy with cerebral palsy and vomiting

- Boy lives at home with parents
- Non-verbal, but communicates in other ways
- Vomiting bilious fluid 2 days



Centrally placed dilated loops of small bowel proximal to the obstruction.

3 or more instances of dilatation >2.5cm

*“Valvulae conniventes”* - mucosal folds of small bowel





If looking for a bowel obstruction always take supine and erect / lateral decubitus film.

Multiple air-fluid levels

# Full blood count

- Haemoglobin: 15.7 g/dL
- MCV: 89
- RDW: 14.2
- Platelets: 617
- White Cell Count: 39.2 ( $\times 10^9$ )
- Neutrophils: 25.09
- Lymphocytes: 3.14
- Monocytes: 7.45
- Bands: 3.14
- Myelocytes: 0.39
- Sodium: 149 (135-145)
- Potassium: 5.4 (3.5-5.5)
- Chloride: 119 (98-110)
- Bicarbonate: 15 (22-30)
- Urea: 20.3 (2-6)
- Creatinine: 172 (50-110)
- Lactate 5 (<2)

# Treatment

- Antibiotics – amoxicillin, gentamicin, metronidazole
- Laparotomy – torsion of meckels diverticulum with small bowel obstruction
- Repaired, recovering



“Haustra” from large  
bowel obstruction  
Peripheral not central

# 2-year-old boy with fever, tachypnoea, arm swelling

- Minor burn on fingers of right hand 2 weeks before
- 2 days fever, red cheeks, reduced activity
- 1 day left arm swelling ++ and painful left hip
- Rash





Left arm – swollen, tense and tender, unable to supinate



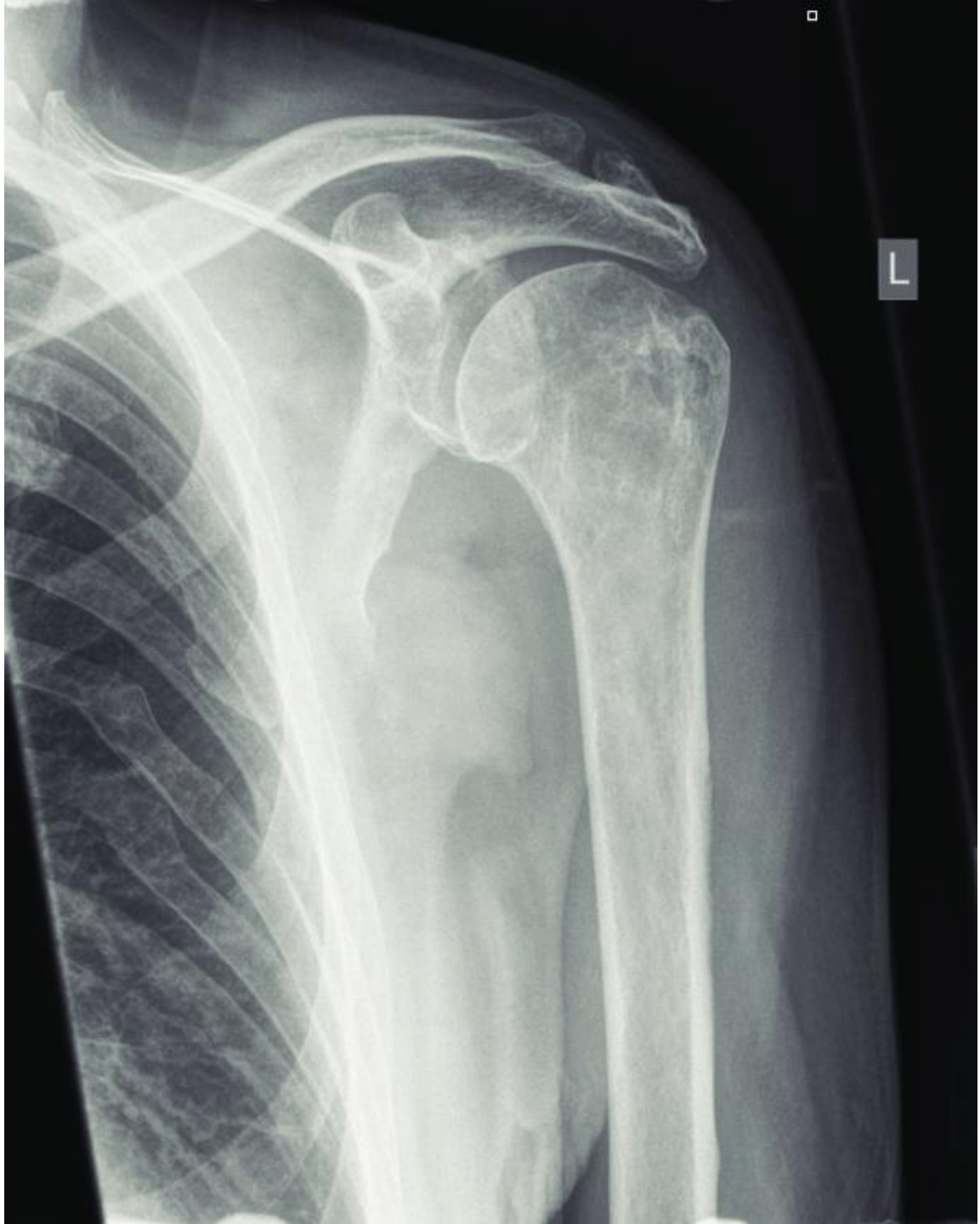
Rash – erythematous maculopapular, limbs, trunk, face



Tattoo

Left arm – swollen, tense and tender, unable to supinate



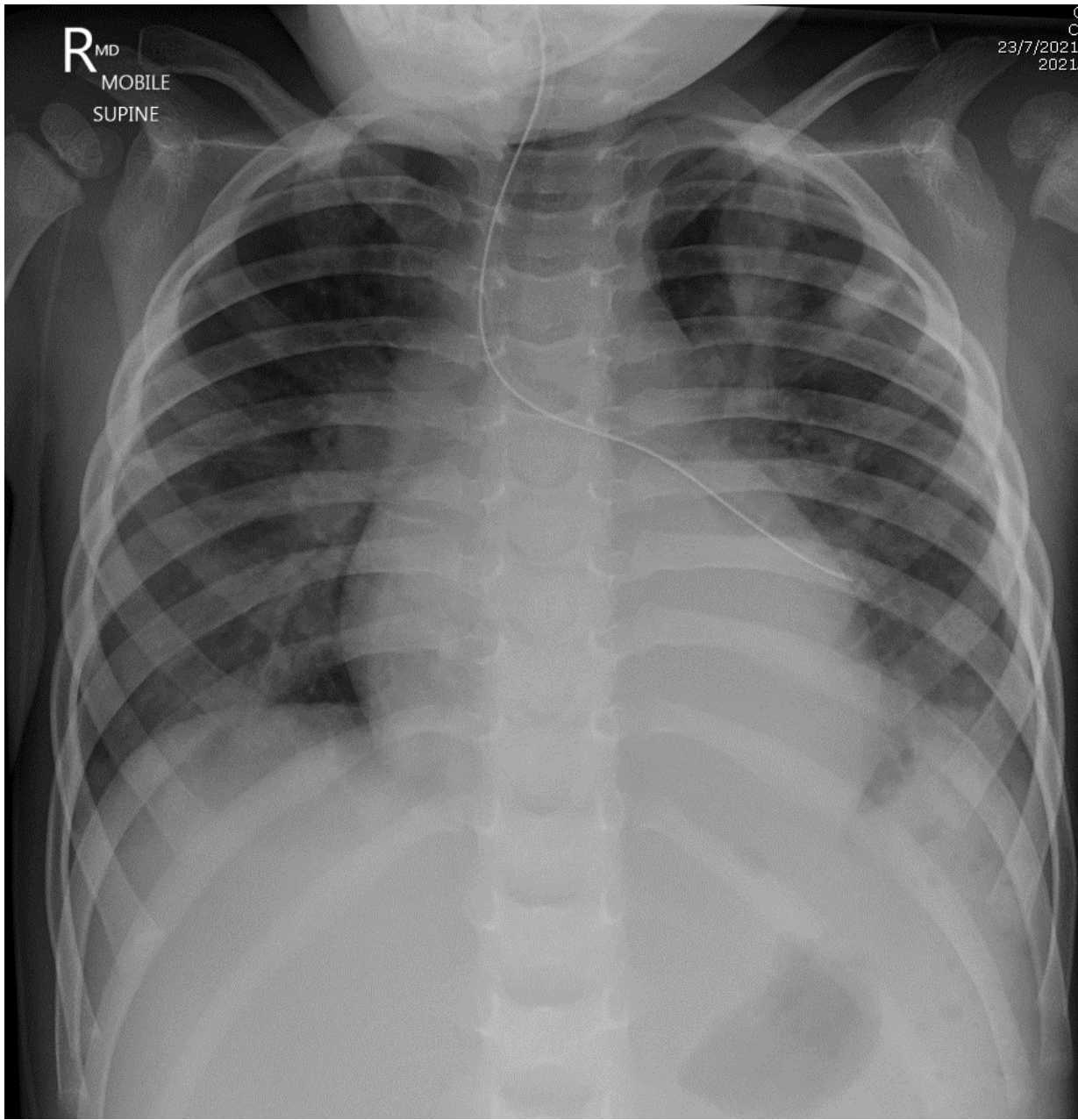


# Full blood examination

Haemoglobin	10.4 d/dL	White Cell Count	1.6 (6-17 x 10 <sup>9</sup> )
MCV	76	Neutrophils	0.69
RDW	13.5	Lymphocytes	0.34
Platelets	132	Monocytes	0.05
		Bands	0.46
		Metamyelocytes	0.03
		Myelocytes	0.02
		I/T Ratio	0.43

# Electrolytes and blood gas

- pH: 7.28
- pCO<sub>2</sub>: 46
- pO<sub>2</sub>: 46
- Bicarbonate: 23
- Base Excess: -4
- S<sub>v</sub>O<sub>2</sub>: 77.4
- Sodium: 123 mmol/L
- Potassium: 2.9
- Chloride: 102
- Glucose: 5.3
- Lactate: 5.0

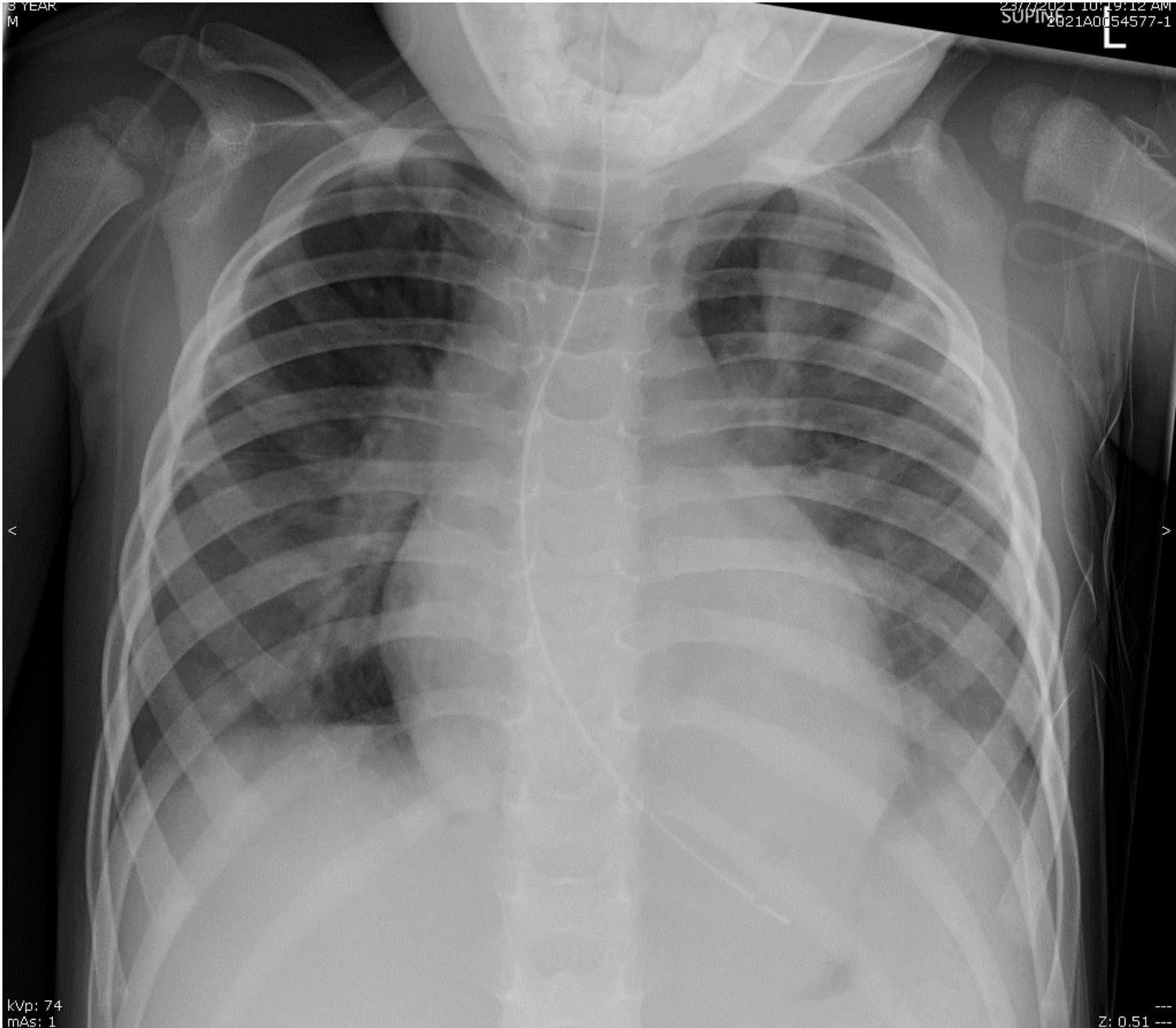


R<sup>MD</sup>  
MOBILE  
SUPINE

23/7/2021  
2021

3 YEAR  
M

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SUPINE  
2021A0054577-1



kVp: 74  
mAs: 1

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Z: 0.51 ---

- Fever and maculopapular rash
- Hyponatraemia
- Neutropenia
- Swollen, tense arm
- 2 weeks following a minor skin burn

= Staph sepsis with septic arthritis, venous thrombosis

# Questions

- Gram positive cocci in blood cultures
  - Staph aureus or Group A strep?
- Does the arm need surgical washout?
- Is it MSSA or MRSA?
  - MSSA: flucloxacillin
  - MRSA: vancomycin, rifampicin, linezolid, clindamycin
- Venous thrombosis on ultrasound - heparin

# Lessons from the week

- Profuse vomiting without diarrhoea is almost never “gastro”
- Know the signs (clinical and x-ray) and causes of small bowel obstruction in children
- Supine *and erect* x-ray
- If Staph aureus is in one place, look everywhere: bones, joints, lungs, pericardium, heart valves, meninges, blood vessels (thromboses)
- If Staph infection is not getting better
  - Inadequate source control
  - MRSA