Oxford University Hospitals NHS
NHS Trust

CASE 6

Angela M Minassian
SpR in Infectious diseases & Microbiology
OUH NHS Trust, Oxford, UK

30yr-old male, IV drug user 15 yrs

- “Bad hit”

  -> A&E with sweats, shakes, sore throat
- 1 week later more unwell with myalgia, rigors, vomiting & diarrhoea (injecting throughout)
- Given methadone last 3/7 as too unwell to inject
- Now presents with 24hrs painful arms and legs, especially R heel & calf
- Red areas developing over arms and legs
- Pain L rib

On examination

- Alert & oriented, in pain
- Febrile (39.4)
- Tachycardic (113), normotensive (BP 145/81)
- Swollen R foot and ankle, tender calf
- Reduced range of movement of ankles: R>L
- Patchy discrete erythema L foot, L thigh, forearms
- No murmurs, no peripheral stigmata of endocarditis
- Few crepitations L base, sats 97% on air
- Injection sites unimpressive

Differential diagnosis?

1 or more of:

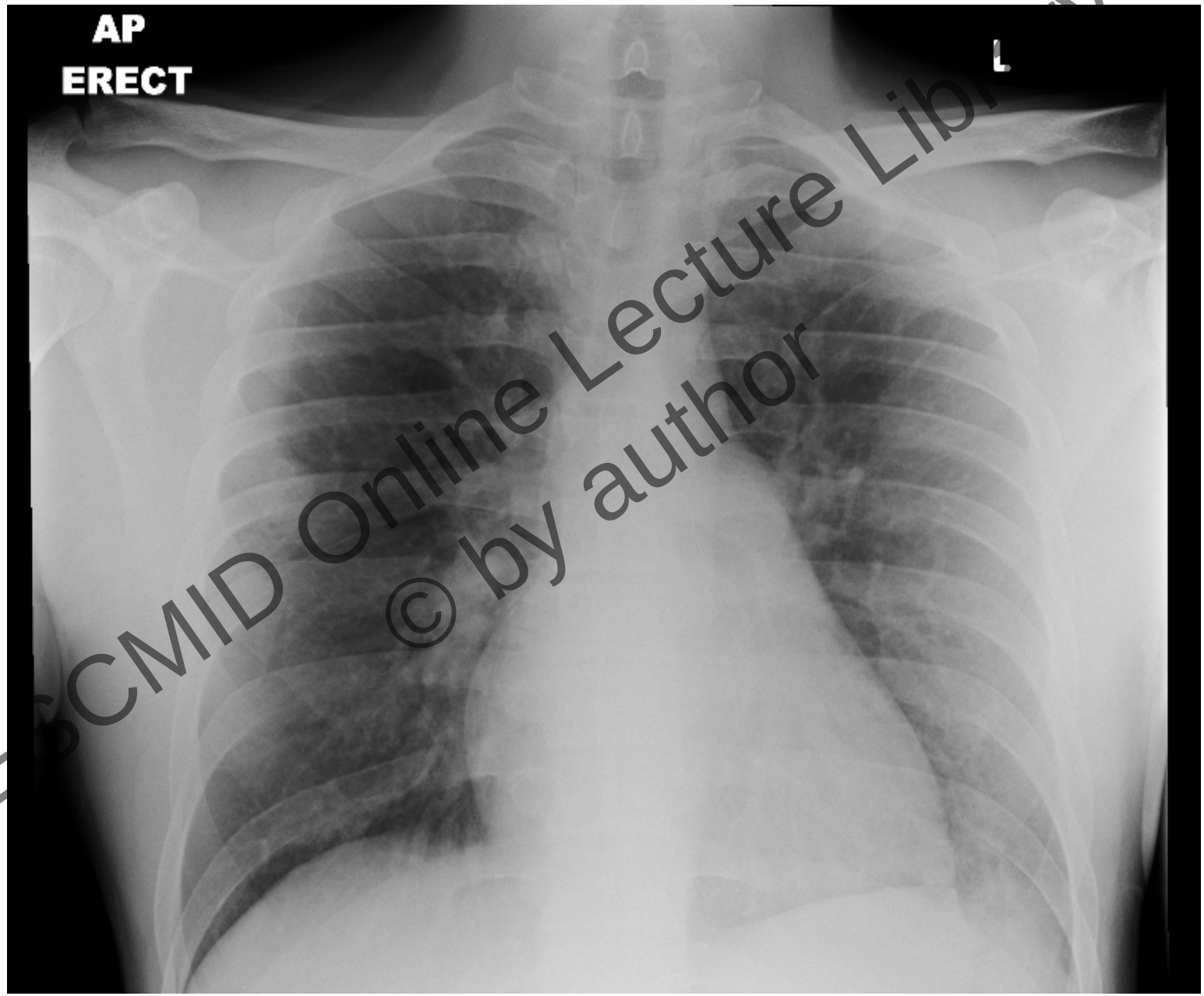
- Cellulitis
- Ankle septic arthritis
- Pneumonia
- Endocarditis

+

Opiate withdrawal

Investigations

- Hb 10.7g/dl, WCC 10.7x10^9/l (**neutrophils 9.3**)
- **Platelets 82x10^9/l**
- Electrolytes & creatine kinase normal
- Creatinine 89umol/l
- **CRP >160g/l**
- Bili 15, **ALT 251 IU/l**, ALP 324 IU/l, albumin 36g/l
- Normal APTT/PT
- Recent HIV, HCV & HBV serology negative (3 wks pre this admission)
- CXR….



Management

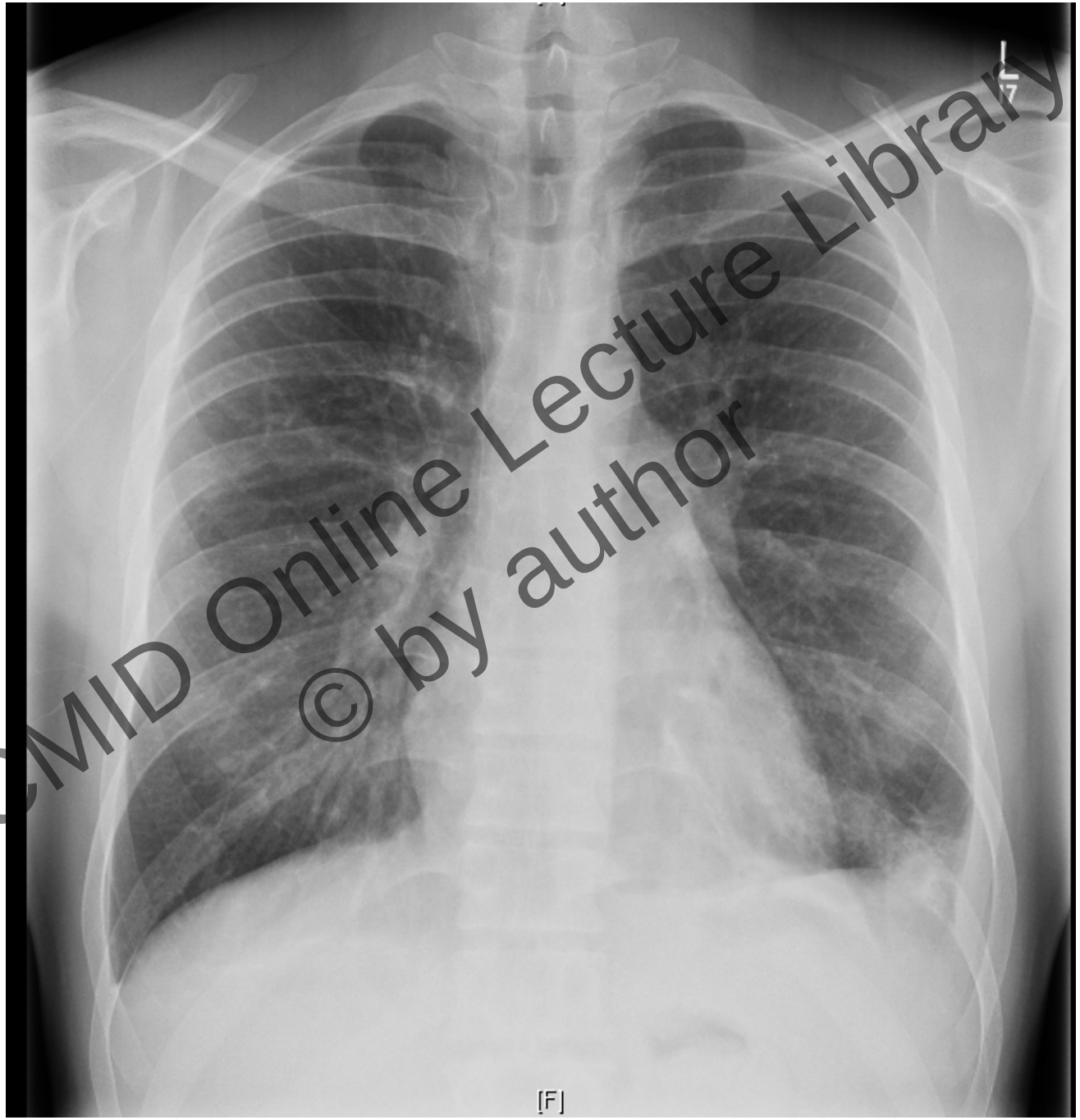
- Started IV ceftriaxone then transferred to ID ward
- On arrival: impression multifocal cellulitis from injecting
- Septic arthritis unlikely
- Ceftriaxone & methadone continued

24 hours later….

- Group A streptococcus from 1 set blood cultures (2/2 bottles)

Day 2

- Fevers more low grade
- Evolving L basal crepitations, sats 95%
- Ongoing R ankle pain with reduced range of movement…



Day 3-4

- Persistent CRP
- Unchanged WCC
- ALT jump 251-> 482
- ALP jump 324-> 692 (normal bilirubin)
- Albumin drop to 30

- Ongoing dyspnoea and L rib pain….

Worsening LFTs

- Sepsis
- B lactams
- Acute decompensation of underlying liver disease 2 to:
  - Sepsis/ B lactams/ other potentially hepatotoxic drugs (e.g, paracetamol)
- Acute viral hepatitis

-> ceftriaxone stopped and switched to moxifloxacin to cover chest & Grp A streptococcus

Day 5

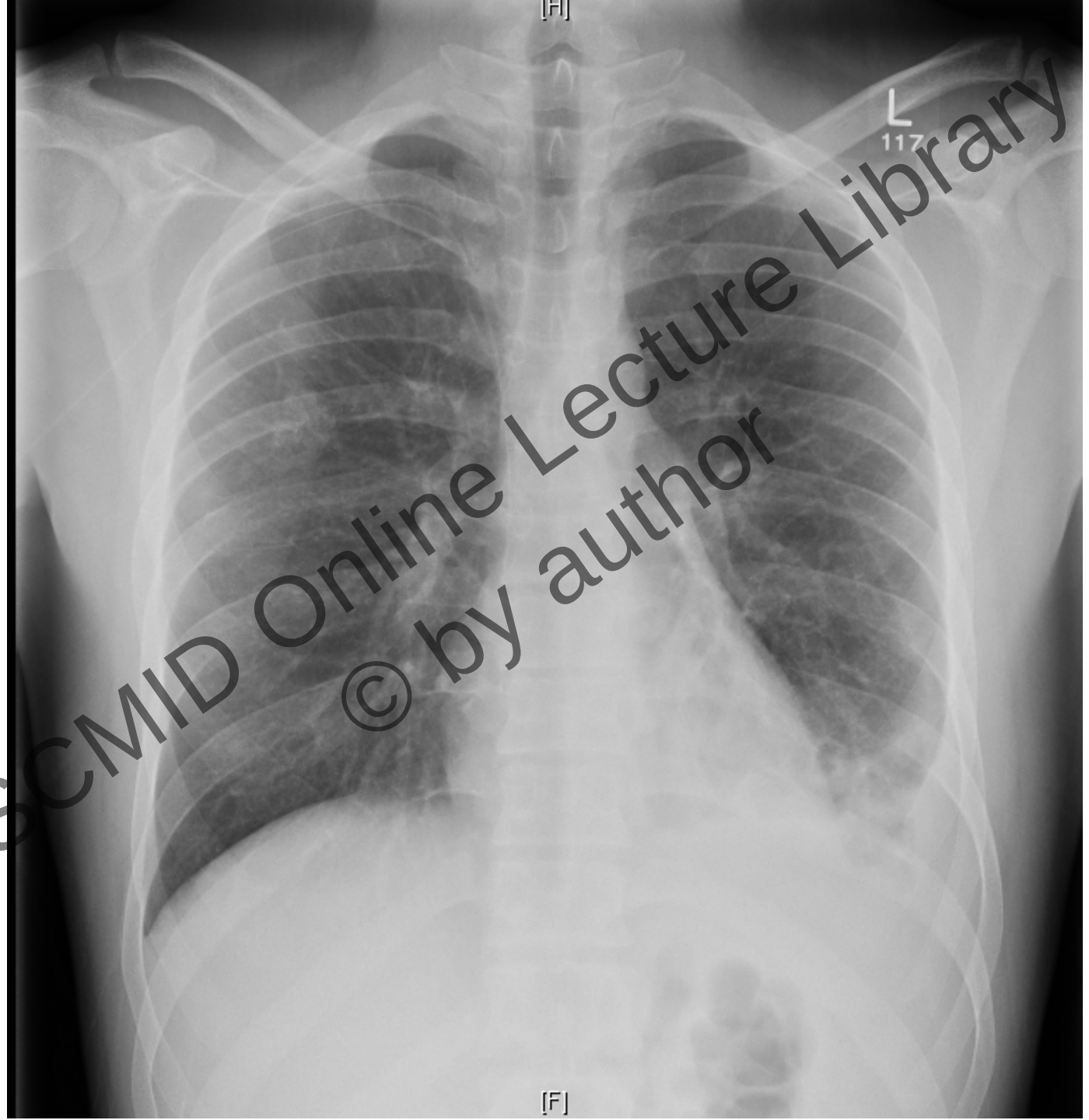
- Mild hepatosplenomegaly on ultrasound scan

- Repeat hepatitis serology from admission:
  - HIV negative
  - HBS negative
  - HCV Ab low positive/equivocal -> repeated and sent to reference lab. PCR also sent.

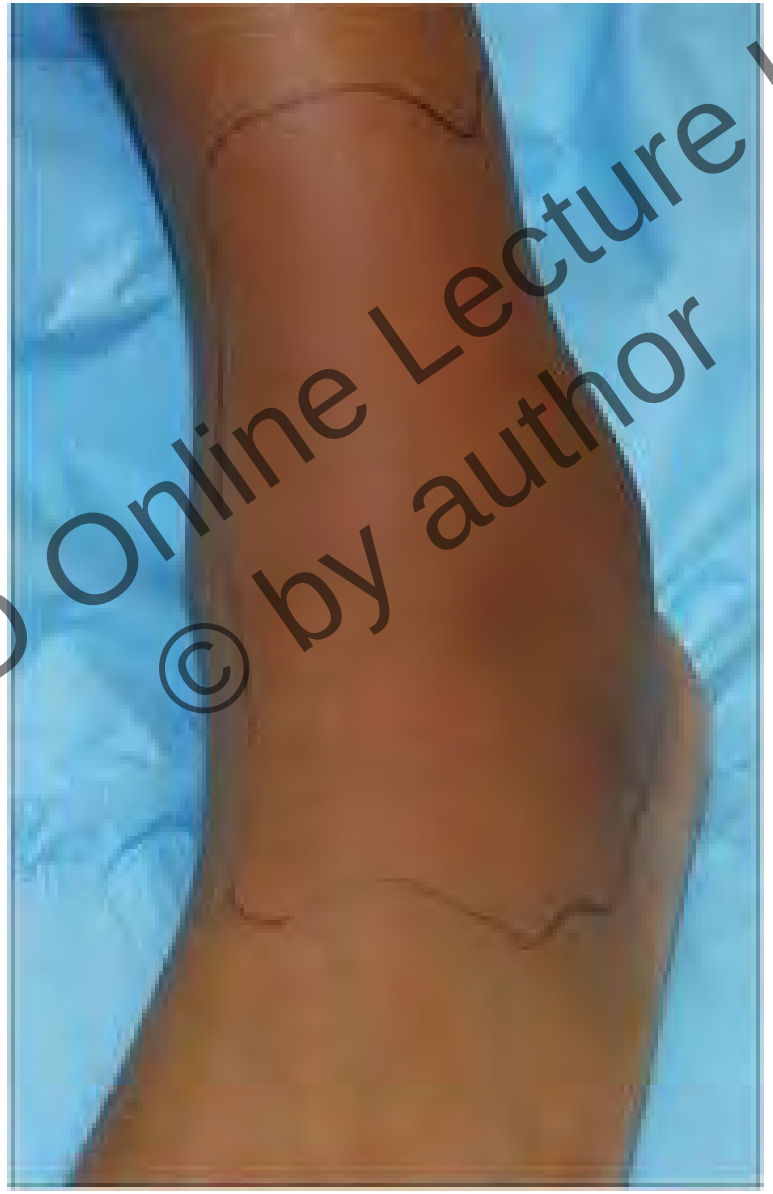
Day 6

- Worsening pleuritic chest pain and dyspnoea
- Worsening pain R ankle & reduced range of movement
- Ongoing fevers
- ECG: nil acute

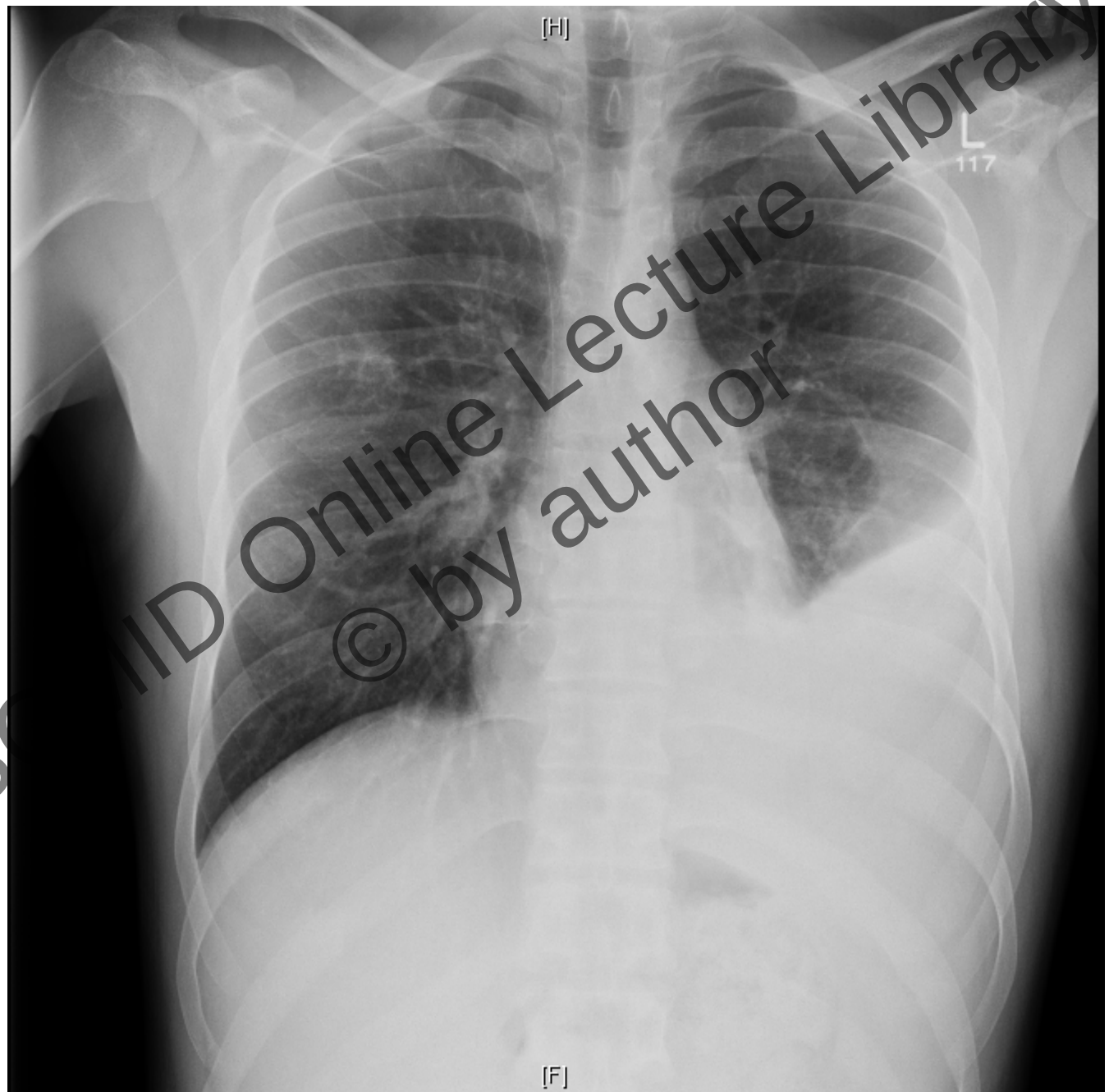
- Imp: ? Hospital-acquired pneumonia
  ?Possible DVT -> pulmonary embolism
- -> moxifloxacin switched to meropenem



Day 7-9: worsening ankle swelling



Day 12: Ongoing fevers



Day 12 continued

- Chest drain inserted: straw coloured fluid
- pH 7.4, glucose 4.7, no cells/organisms, cultures negative
- Drained to dryness over 48 hours ~ 1.2 L

- Hep C PCR positive: VL >7 million IU/ml!!!

Progress -> Current

- Continued improvement day 12-19
- Completed 10 days IV vanc -> oral amoxycillin for 2wks
- ALT peaked at 1000 day of discharge

1 mth later:

- Outpatient follow-up: genotype 2b

2 mths later:

- LFTs completely normal
- VL undetected -> spontaneous clearance

	28/9	20/10 ADMIT	26/10	01/11	04/11	8/11	10/11 DISCHG	22/11	21/1/13
Bili	14	**15**	13	13	10	**22**	**17**	11	**8**
ALT	26	**251**	**448**	**387**	**534**	**900**	**1057**	166	**25**
ALP	134	**324**	**811**	**754**	**1175**	**1999**	**1665**	633	**148**
Alb	44	36	**30**	31	33	33	34	48	48
Hb	12.1	10.7	**7.4**	7.9	7.8	8.7	8.6		
WCC	6.2	10.7	9.1	5.2	5.1	4.8	5.5		
Plts	169	**82**	409	576	534	531	393		

Learning points

- Acute hepatitis C seroconversion coinciding with multifocal Group A streptococcal sepsis
- Always consider acute viral hepatitis if worsening LFTs in high-risk patient, even if alternative diagnosis
- A second pathology (eg sepsis) may exacerbate & unmask an underlying problem
- Recent negative hepatitis serology ≠negative now!
- A missed diagnosis may result in missed window to treat

Acknowledgements

- Cormac MacGee
- Paolo Polzella
- Joe Browning
- Christopher C Conlon