

M5 MEQs 2016

Session 3: SOB

18/11/16

<http://tinyurl.com/hn7qzt3>

Question 1

Ms Tan is a 52 year old female with no past medical history.

She comes to the emergency department presenting with a fever for 3 days and productive cough. She has no chest pain or shortness of breath.

On examination

H S1S2

L Right sided lower zone coarse crepitation

A Soft non-tender

A Chest X-ray was done:



Question 1

The patient was diagnosed with a CURB-O community acquired pneumonia.

Which of the following empirical outpatient treatment regimes is the most appropriate for community acquired pneumonia in a this patient?

A: Amoxicillin-clavulanic acid

B: Amoxicillin-clavulanic acid and clarithromycin

C: Clarithromycin

D: Moxifloxacin

E: Doxycycline

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Question 1

- In a previously healthy outpatient, common causes of community acquired pneumonia includes streptococcus pneumoniae, haemophilus influenzae and atypical pathogens like Mycoplasma pneumonia and respiratory viruses
- Monotherapy is preferred over dual therapy
- Macrolides and doxycycline are active against S. pneumoniae, H. influenzae and atypical pathogens
- Beta-lactam monotherapy does not provide coverage against atypical pathogens.

Question 2

Ms Tan returns 2 weeks later complaining of a persistent cough, pleuritic chest pain and intermittent fevers. She admits to not completing her antibiotics due to gastrointestinal side effects.

Physical Examination:

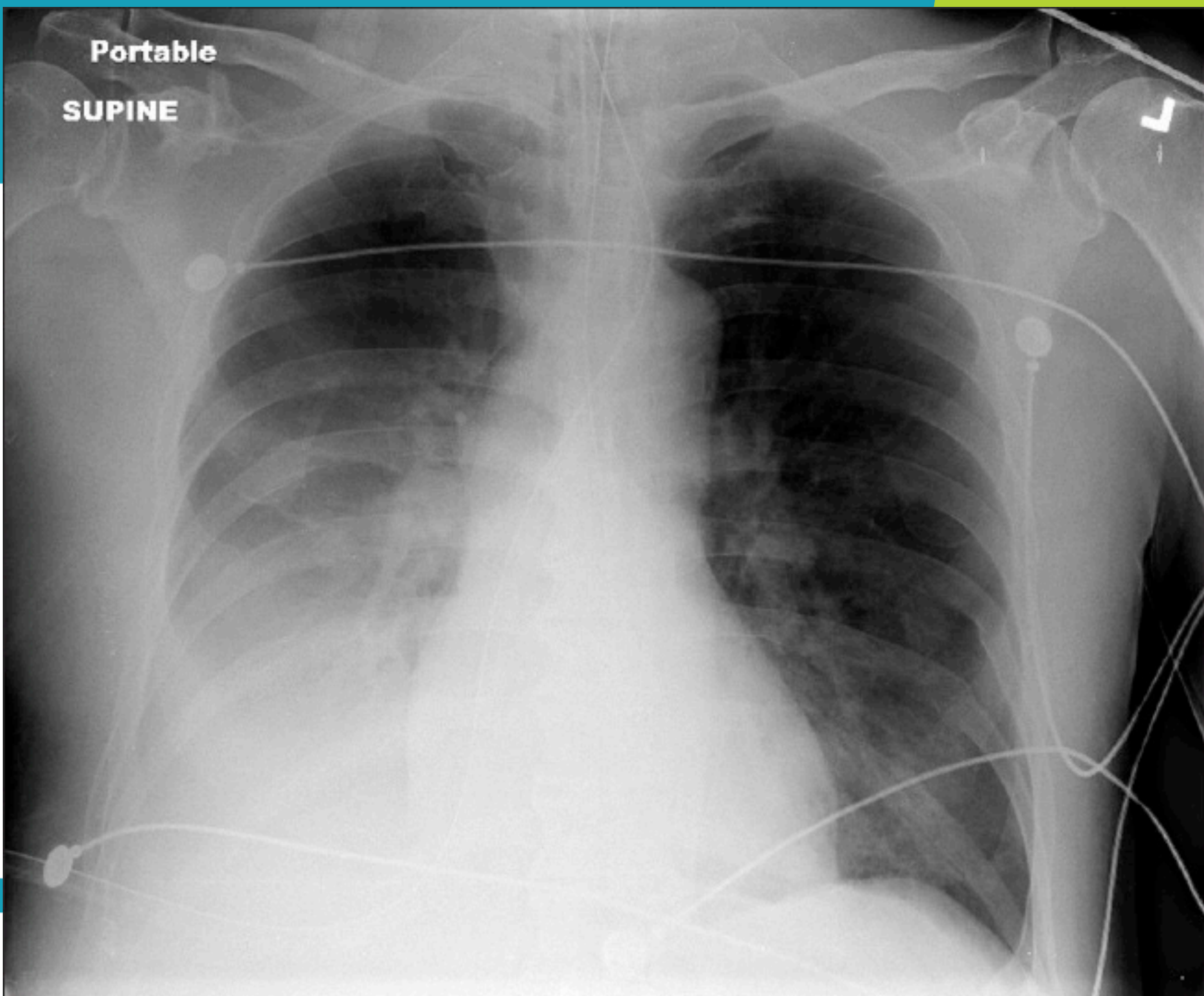
T 36 HR 100 BP 150/72 SpO2 97% on RA

H S1S2

L Decrease air-entry and crepitation over the right lower zone

A Soft non-tender

Portable
SUPINE



Question 2

What is the X-Ray findings?

1. Left lower zone consolidation
2. Left lower lobe collapse
3. Left lower zone consolidation with a right pleural effusion
4. Pulmonary mass in the left lower lobe
5. Raised left hemiphragm

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Question 3

Patient was admitted for further management.

The decision was to proceed with a diagnostic pleural tap.

A pleural tap was done under aseptic techniques.

Straw coloured fluid was aspirated.

The provisional report shows the following:

pH= 7.01, glucose= 35, LDH = 2100, WBC = 5000 Total protein 400

Serum LDH 200 Serum Total protein 80

Gram stain negative, culture pending

Question 3

What is the diagnosis of this patient?

1. Uncomplicated parapneumonic effusion
2. Complicated parapneumonic effusion
3. Empyema
4. Transudative effusion
5. Chylothorax

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Question 3

Light's criteria (Annals 1972;77:507)

- TP eff/ TP serum > 0.5 or
- LDH eff/LDH serum >0.6 or
- LDH eff > 2/3 upper normal limit of LDH serum

Etiology	appear	WBC diff	RBC	pH	Glu
Uncomplicated parapneumonic	Turbid	5-40,000 polys	<5000	>7.2	>40
Complicated parapneumonic	Turbid-purulent	5-40,000 polys	<5000	<7.2	<40
Empyema	purulent	25-100,000 polys	<5000	<7.2	<40
Malignancy	bloody	1-10,000 ly	<100,000	SI ↓	SI ↓

TABLE 5

Definitive diagnosis based on pleural fluid analysis

DIAGNOSIS	CRITERIA
Urinothorax	pH < 7, transudate, pleural fluid-to-serum creatinine ratio > 1
Empyema	Pus, positive Gram stains or cultures
Malignancy	Positive cytologic testing
Chylothorax	Triglycerides > 110 mg/dL, chylomicrons
Tuberculosis, fungal infection	Positive stains or cultures
Hemothorax	Hematocrit > 50% of blood
Esophageal rupture	pH < 7, high amylase (salivary)

Each of these tests should be ordered based on clinical suspicion

Question 4

While awaiting the other pleural fluid results, how will you manage this patient?

1. Start intravenous antibiotics while awaiting rest of pleural fluid results
2. Insert chest drain and administer intra-pleural erythromycin
3. Start intravenous antibiotics and insert a chest drain
4. Discharge patient with 6/52 of oral augmentin and klacid
5. Start intravenous antibiotics and arrange for CT thorax to workup for malignancy as a cause for obstructive pneumonia

Question 4

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Question 5

The chest drain was draining well for the first 24h, however thereafter, you noted a decrease in the drainage.

On examination, what will indicate that the chest drain is functioning.

1. The chest drain is oscillating but not bubbling
2. The chest drain site has surrounding crepitus
3. The chest drain is oscillating and bubbling
4. The chest drain is not oscillating and not bubbling
5. The chest drain skin marking has moved 2cm outwards

Question 5

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Question 5

Trouble shooting chest drains

- Placement of the chest drain – skin marking
- Surrounding skin
- Is it bubbling => bronchopleural air leak
- Is it oscillating => not oscillating
 - Blocked tubing: Clump/ kinked, Clots/ viscous fluid
 - Tube trapped in a fissure
 - No more fluid to be drained
 - Complete re-expansion of the lung

Question 6

While admitted in the hospital, it was noted that the patient's blood pressure was trending upwards to SBP 160-170/ DBP 100-110 on multiple readings. Patient was diagnosed with newly diagnosed hypertension.

Which of the following is an appropriate antihypertensive therapy to start?

1. Hydrochlorothiazide 12.5mg OM
2. Amlodipine 5mg OM
3. Enalapril 5mg BD
4. Losartan 50mg OM
5. Any of the above is appropriate

Question 6

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Question 6

Patient was started on Amlodipine 5mg OM.

Despite this, her blood pressure has been ranging SBP 150 - 160 / DDP 90 – 100.

What will you do next?

1. Increase to amlodipine 10mg OM
2. Increase to amlodipine 5mg BD
3. Bloods pressure is acceptable – to continue current dose
4. Add hydrochlorothiazide 12.5mg OM
5. Any of the above is appropriate

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5. Any of the above is appropriate

Question 7

- As antihypertensive agents are titrated or added when there is inadequate blood pressure control, it is important to recognize that there is a nonlinear and diminishing blood pressure—
- A combination of two agents at moderate dose is often more successful at achieving blood pressure goals than one agent at maximal dose.
- This strategy also minimizes the side effects that are more commonly noted at higher doses.