Example Patient Case

Patient Case

ID: RB is a 72 y/o woman who presents to your emergency department

CC: breathlessness

HPI: RB explains to you that for the past 3 days she has been experiencing increasing cough, breathlessness and sputum production. She states that she has been coughing up more sputum than usual and describes her sputum as being yellow and cloudy. She says that she has felt unwell for the past few days and has been increasingly tired and that she has had to use her blue inhaler more frequently than usual. Prior to this recent episode, she states that she was having some difficulty functioning at home and that over the past 6 months or so, she has noticed that she becomes breathless when dressing and drying her hair and that when doing activities around the house, such as making her bed and doing the dishes, she often has to stop and rest because she is short of breath. She has been admitted to hospital twice in the last year with similar symptoms, the last time being in October 2022. RB is diagnosed with an acute exacerbation of COPD and is admitted under your medical team for care.

PMHx:

COPD, diagnosed 4 years ago
HTN x 10 years

MPTA:
Salbutamol 200 mcg inh prn
Ipratropium 40 mcg qid
HCTZ 25 mg po daily

Allergies:

NKDA

Social Hx:
EtOH: occasional, socially
Smoking: 25 pack year history
Illicit drug use: None
Lives: Retired, lives with her husband in a house and is independent with ADLs

O/E:
Overall: Older lady who appears to be in moderate distress
Vitals: BP 150/95; HR 100; RR 25; T 38.4 ; O_2sat 88% on RA
CNS: A+O x3; diaphoretic
HEENT: cyanotic and pursed lips
RESP: barrel chest, shallow breathing, using accessory respiratory muscles to breathe, decreased air entry throughout, crackles at bases, wheezing
CVS: Normal S1,S2, no S3/S4, no murmurs
GI: Abdomen soft, non-tender
GU: unremarkable, SrCr 101
MSK: unremarkable
DERM: skin cool, not cyanotic
ENDO: unremarkable
HEME: Hgb 150, Plts 303, WBC 12, Neut 9
LYTES: Na 139, K 3.9, Cl 101, HCO_3 26, BUN 8.6

Diagnostics:

CXR: lung hyperinflation, some infiltrates, no focal consolidation
ABG: 7.38/45/70/26
Microbiology: sputum sample taken, gram stain and culture results pending

RB's Current Medical Problems:

1. Acute exacerbation of COPD
2. Chronic management of COPD

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1. What are RB's risk factors for COPD?

2. What signs and symptoms does RB present with that are consistent with an exacerbation of COPD?

3. What are the goals of therapy for RB?

4. What are the therapeutic alternatives to treat RB's acute exacerbation of COPD?

5. Are antibiotics indicated to treat RB's exacerbation of COPD and if so what are the common pathogens in AECOPD and what are the antibiotic choices?

6. What is the evidence for the use of systemic corticosteroids in the treatment of an acute exacerbation of COPD?

Our patient is improving on enhanced bronchodilator therapy, antibiotics and corticosteroids. The team is now discussing what adjustments should be made to RB's chronic management of COPD to prevent future exacerbations of COPD and asks for your advice.

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7. How would you classify the severity of RB's COPD?

8. What are the non-pharmacologic options to manage RB's COPD?

9. What are the therapeutic alternatives for the management of RB's severe COPD?

10. What is the evidence for the use of inhaled corticosteroids in the chronic management of severe COPD?

11. What is your therapeutic plan for RB's chronic COPD management?

12. What would you monitor for

Efficacy?
Toxicity?