

PT 211 – Pharmacology for Physical Therapists

Case Discussion – March 17, 2016

Topic: Respiratory Drugs

Case:

JK is a 40 year-old male who works in the shipping and delivering department at UCSF. His job involves transporting mail and packages to various offices on campus. About 5 days ago, while trying to move several heavy boxes, he injured his lower back. Because the pain has temporarily prevented him from walking and moving things, he has had to take some time off from work, and was referred to your PT clinic. "I'm here to get my back 'fixed.'"

CC: Low back strain x 5 days

PMH: Asthma (since childhood)
Hypertension diagnosed 1 year ago
Diabetes diagnosed 1 year ago

SH: Works in the delivery department at UCSF, married with no children
Current smoker, 1ppd now, 20 pack-year history of smoking
Drinks 1 glass of wine with meal at dinner every night

Medications: ProAir® HFA 90 mcg 2 puffs q4-6h PRN SOB and wheezing
Advair® Diskus 1 inhalation BID
Lisinopril 20 mg PO daily
Metformin 500 mg PO BID
Tylenol 500 mg PO TID as needed

Allergies: NKDA

PE

Gen: slight difficulty when standing and walking

VS (today): BP 125/85 HR 85 T 37.2C WT 75 kg HT 5'9" RR 16
Neuro: A&O x 3

LABS: WNR

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Questions:

A. From JK's medication list, please provide an indication for each drug.

Drug	Indication

B. Looking at the medications JK currently uses to manage his asthma, please provide the active ingredients in each of these medications. What are some common adverse effects associated with each medication?

Medication	Ingredient(s)	Associated Adverse Effects

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- C. To manage JK's low back strain, you've planned for an initial treatment approach focusing on pain relief and pain-free functional movement. In today's first PT session with the patient, you decide to use aquatherapy at the pool available in your facility. Right before getting into the pool, JK is observed smoking a cigarette.

Using a floatation device and light ankle weights, you guide the patient to the deep end of the pool so that his feet do not touch the bottom of the pool. You ask JK to walk in place slowly. Within a few minutes of starting this part of aerobic exercise, JK begins to experience shortness of breath, and you notice he has also turned a little pale. You immediately lead him out of the pool. His BP and HR are now 150/90 and 98 respectively.

What do you think is happening to your patient?

- D. Luckily, JK has a couple of inhalers (ProAir® HFA inhaler and Advair® Diskus) in his bag. You run to grab them for him.

Which inhaler should you give the patient in this emergency situation?

Being an extremely observant physical therapist, you also notice that JK just refilled this inhaler and it is brand-new. What do you think the patient needs to do before he starts using it?

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- E. Based on what you saw in Part C, what would your action plan be for the next PT session?
- F. JK's lower back pain has been improving tremendously after only a few PT sessions with you. He is now able to get back to work and he is very thankful for your help.

One day, he asks you: "My wife brought home two cats last week! I must be allergic to cat hair because I keep having runny nose, watery eyes, and feel miserably congested. I also think I'm coming down with a cold... I heard Benadryl® Allergy and Cold works like magic. Do you think I should go buy it? I tried something else a few days ago, but it made me so sleepy."

What is your response to JK? Is the medication a good choice for him? If yes, provide your rationale. If no, provide an alternative option.

(Hint: you may want to look up what ingredients are in Benadryl® Allergy and Cold, side effects, etc. What treatment options or remedies do you already know from everyday life?)