



Region I & II Conference



SNPhA/Kroger Clinical Skills Competition

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Coordinator

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PATIENT CASE

Carly Parker is a 32-year-old African American female with a past medical history of hypertension and mild persistent asthma. Her hypertension is well controlled. Her asthma is controlled but she did report an incident two weeks ago when she was having minor difficulty breathing after going to a bar with friends. She thinks it was because patrons were smoking inside. She states that her inhaler did not give her much relief, but she felt better after they left.

Her job as a high school band director is becoming very demanding requiring her to stay late after school hours often. The stress has caused her to have difficulty falling asleep over the last six months. She was diagnosed with insomnia and is coming to Kroger Pharmacy to pick up her new medication along with her other medications which are ready to be picked up. Ms. Parker also states that she has been having constipation and has not had a bowel movement in three days. She would like for the pharmacist to make a recommendation for treatment. She is in a rush because she needs to get supplies for the band "Sweet and Sour" pancake & grapefruit breakfast-for-dinner fundraiser this weekend.

Medication Profile

NEW Zolpidem (Ambien) 5 mg by mouth at bedtime

Lisinopril 20 mg by mouth once daily

Fluticasone (Flovent HFA) 88 mcg take 1 puff by mouth twice daily

Albuterol (ProAir) 90 mcg MDI take 1-2 puffs by mouth q4-6h as needed for shortness of breath

No allergies on profile

Immunization record is up-to-date

Clinical Counseling Pearls

- Counsel on new prescription(s)
- Advise patient on potential drug-drug and/or drug-food interactions
- Counsel on inhaler technique
- Counsel patient on OTC medication(s) and/or nonpharmacologic interventions
- Recommend lifestyle modifications

IMPORTANT NOTE

The information provided in this answer key is detailed for completeness. Students are expected to use professional judgement to educate the patient with the most pertinent counseling points within the allotted time (5 minutes).

Students are evaluated on professional knowledge, clinical pearls, communication skills, and patient interaction during the counseling session.

ANSWER KEY

New Prescription

Zolpidem

- Take 1 tablet by mouth at bedtime
- Avoid taking this medication with any other medications that can make you drowsy
 - No OTC medications - diphenhydramine, melatonin
- This medication is not intended to be used long-term, if sleep problems continue to persist after two weeks of therapy call your doctor.
- Only take this drug if you are able to get a full night's sleep (7-8 hours)
- Side effects include dizziness, feeling sleepy the next day, headache, upset stomach, diarrhea, or feeling tired/weak.
- Avoid drinking alcohol while taking this medication. Do not take this medication if you have alcohol in the evening or before bed
 - Alcohol can make falling asleep easier but disrupts sleep maintenance
- Some people have reported completing tasks while they were not fully awake such as driving, making and eating food, or having sex. Most of the time users do not remember completing these tasks. If this happens to you talk with your doctor.
- If a dose is missed, skip it until the next night. Never double up on doses or take more than what is prescribed.
- Store this medication at room temperature in dry place away from any children, elderly family members, or pets.

Drug Interactions

Drug-Drug Interactions

- Zolpidem and diphenhydramine: CNS Depressants may enhance the CNS depressant effect of Zolpidem
 - Risk D: Avoid when possible
- Zolpidem and Melatonin: May enhance the sedative effect of Hypnotics (Nonbenzodiazepine)
 - Risk C: Monitor therapy
- Zolpidem and St John's Wort: May decrease the serum concentration of Zolpidem
 - **Risk X:** Avoid combination

Drug-Food Interactions

- Zolpidem - Maximum plasma concentration and bioavailability are decreased with food; time to peak plasma concentration is increased; half-life remains unchanged. Grapefruit juice may decrease the metabolism of zolpidem.
 - Management: Do not administer with (or immediately after) a meal. Avoid grapefruit juice.

Constipation

Exclusions for Self-care

- Marked abdominal pain or flatulence

- Fever, nausea, vomiting
- Age <2
- Blood in stool
- Symptoms persisting >3 weeks or over 3 months
 - *NOTE: The patient does not meet any of these criteria, therefore it is appropriate to make recommendations*

Non-Pharmacologic

- Increased fluid intake, fruits, vegetables
- Eliminate offending medications
- Adequate fiber intake from diet
- Schedule routine bathroom time
- Do not delay when urge to go

OTC Medications

Medication use should be limited to 7 days, if exceeds limit without results recommend visiting emergency clinic. Follow product package instruction for specific duration of use.

- Bulking Agents
 - [Psyllium \(Metamucil\)](#) 2.5-30g/day, [Polycarbophil polymer \(FiberCon\)](#) 4-6g/day, [Methylcellulose \(Citrucel\)](#) 4-6g/day.
 - MOA: All work by stimulating/irritating the colonic mucosa and water-holding capacity (fiber)
 - SE: Flatulence, abdominal bloating, and distention
 - Clinical Pearls: Few adverse effects. Patient should drink sufficient water. Effects in 3 days.
- Emollient Laxatives
 - [Docusate \(Colace\)](#) 50-360mg/day
 - MOA: Surfactant that lowers the surface tension of feces
 - SE: Stomach cramps, fecal soiling
 - Clinical Pearls: Stool softener. Oral/suppository/enema form. Effects in 1-3 days. Used for prevention.
- Hyperosmolar Agents
 - [Polyethylene Glycol \(Miralax\)](#) 17g/dose
 - MOA: Osmotic gradient allows for water to be secreted into the gut lumen
 - SE: Flatulence, nausea, abdominal discomfort
 - Clinical Pearls: Bowel movements in 1-3 days. Too much can cause diarrhea. Dehydration
- Lubricating Laxative
 - [Mineral Oil \(GoodSense\)](#) 15-45mL/day
 - MOA: Coats fecal material preventing water from escaping
 - SE: Abdominal cramps, diarrhea, nausea, oily rectal leakage
 - Clinical Pearls: Less electrolyte issues than with saline laxatives. Should be used with stimulant. Administer on empty stomach. Avoid in pregnancy.
- Saline Laxative
 - [Magnesium citrate \(Citroma\)](#) 195-300mL, [Sodium phosphate \(Fleet Enema\)](#) 4.5oz enema
 - MOA: Osmotic retention of fluid which distends the colon with increased peristaltic activity
 - SE: Abdominal pain, diarrhea, flatulence, nausea, vomiting
 - Clinical Pearls: Avoid in renal impairment. Can cause fluid and electrolyte depletion. Avoid in pregnancy. Onset 30 minutes to 3 hours.

- Stimulant Laxative
 - Senna (Senokot) 17.2mg daily
 - MOA: Irritation of smooth muscle resulting in increased motility
 - Mild and often used with docusate.
 - Bisacodyl (Dulcolax) 5-15mg daily
 - MOA: Stimulates nerves to cause peristalsis
 - Clinical Pearls: Onset 6-12 hours. Suppository onset 15-60minutes. Electrolyte imbalances.
 - Castor Oil 15-60ml/day
 - MOA: Reduces net absorption of fluid and electrolytes
 - Avoid in pregnancy. Hypotension.
 - SE: Abdominal cramps, diarrhea, nausea, vomiting

Lifestyle Modifications

- Sleep Hygiene
 - Avoid naps. If you do limit to <30 minutes.
 - Avoid caffeine/nicotine close to bedtime
 - Exercise
 - 150 minutes per week of moderate intensity exercise
 - Should not be before bedtime (insomnia)
 - Avoid disruptive food. Do not eat big meals right before bedtime
 - Appropriate lighting
 - Keep your room dark at night
 - Bedtime Routine
 - Example: bath, reading book, stretching
 - Pleasant temperature
 - 60-67 degrees fahrenheit
 - Ambiance
 - Dim lights, sound machines
 - Do not look at technology such as phone or computer while in bed or just before bed
 - Limit bedroom activity to sleep and sex activity
 - Doing other activities can confuse your body when it is time for you to sleep
- Dietary changes for heart health - reduce sugar and saturated fat intake; eliminate trans-fat; increase omega-3, unsaturated fat, and fiber
 - DASH diet
 - Mediterranean diet
- Incorporate aerobic activity on a regular basis - moderate to vigorous intensity exercise for 30 minutes 5 times per week
- Weight loss
- Reduce stress
 - Get more sleep and try to have a consistent sleep schedule and/or bedtime routine to wind down.
 - Use relaxation techniques like meditation, yoga, or deep breathing exercises. These can be incorporated throughout the day.
 - Incorporating exercise into the daily routine can be beneficial. She may consider taking a walk in the morning or during lunch breaks.
 - Be more intentional about taking personal time to rejuvenate and refocus.
- Cognitive Behavioral Therapy

- Help the patient manage stress and behaviors related to his job.

Additional Counseling: Old Prescriptions

Lisinopril

- Take one tablet by mouth every morning (with or without meals)
- This drug may cause nausea, vomiting, dizziness, headache, or angioedema of the face, lips, throat, or intestines
- Report any signs or symptoms of low blood pressure or a persistent cough
- Do not suddenly discontinue this medication
- Consult with the pharmacist before taking any over-the-counter cough, cold, and allergy medications
- If a dose is missed, take it as soon as possible. If it's closer to the time of the next dose, skip the missed dose and return to your regular dosing schedule. Do not double doses.

Fluticasone

- Take one puff by mouth twice daily
- Assess patients understanding of this medication
 - This is a maintenance inhaler
- Rinse out mouth with water and spit after each use

Albuterol

- Take 1-2 puffs by mouth q4-6h as needed for shortness of breath
- This is a rescue inhaler
- Inhaler Technique
 - If it is first time use, shake and then prime by pressing actuation away from mouth until mist is seen
 - Exhale fully
 - Purse inhaler mouthpiece to lips creating tight seal
 - Simultaneously while breathing in press the actuation
 - Breathe in slowly and deeply
 - Hold breath for 10 seconds or as long as possible
 - Exhale fully
 - If still short of breath, take another dose after 1 minute
 - If you are still short of breath after two doses, visit the hospital or clinic