

Cough



An elderly woman was brought to the hospital to manage hip fracture, she fall on the ground and she said “I have dizziness”, she has a history of heart failure (using diuretics), and was recently taking OTC drugs for wet cough :,

the cause of this condition is:

a-Side effects of drugs used.

b -Infection of inner ear.

c-Heart failure.

d-a and b are correct.

e-All are correct.

A 52-year-old man with a history of chronic obstructive pulmonary disease (COPD) presents to the emergency department with complaints of palpitations, nausea, and insomnia. He reports that he has been taking an over-the-counter cough syrup regularly for the past 2 weeks to relieve cough and breathing difficulty. His past medical history is significant for gastroesophageal reflux disease (GERD), for which he was recently started on cimetidine. He is a chronic smoker. On examination: Pulse: 120/min (irregular) BP: 140/85 mmHg CNS: mild tremors and restlessness ECG: atrial fibrillation with rapid ventricular rate, Which of the following decreases serum theophylline levels?

A. Erythromycin B. Phenytoin C. Cimetidine D. Ciprofloxacin

A 45-year-old man with a history of type 2 diabetes and mild hypertension presents to the pharmacy complaining of nasal congestion and cough for the last 3 days. He buys an over-the-counter cough mixture containing **pseudoephedrine**. That night, he takes the medicine at 10:30 PM. The next morning, he reports poor sleep, palpitations, and higher-than-usual blood glucose readings.

Which of the following best explains this patient's symptoms after taking the cough mixture?

- A. Pseudoephedrine has sedative effects leading to insomnia.
- B. Sympathomimetic action increases heart rate, blood pressure, and can disturb diabetic control.
- C. Phenylpropanolamine and pseudoephedrine reduce blood glucose by stimulating insulin release.
- D. Pseudoephedrine causes central nervous system depression, leading to palpitations and insomnia.

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Cough

Definition

Is an important defensive respiratory reflex caused when the airway is irritated or Mainly caused by upper respiratory tract viral inf. Since viruses increase cough receptor sensitivity and it may be associated with other symptoms of cold obstructed.

Classification

According to duration

1- acute: <3 weeks. Upper respiratory viral inf, common cold

2- subacute: 3-5 weeks. Bacterial sinusitis, asthma.

3- chronic: >5 weeks. Asthma, GERD, COPD, Heart disease, Carcinoma, TB, Drugs

Drugs which may cause chronic cough

- ACEIs: cause dry cough in 20% of users which develop within few days, weeks, or months of treatment.
- β blockers: in patients with asthma or COPD.

Complications: Exhaustion, insomnia, musculoskeletal pain, hoarseness, urinary incontinence.

Other classifications :

1-productive (watery, chesty) : with sputum

❖ Effective: expelled secretions.

❖ Ineffective: difficult to expels

2-Non-productive caused by viral inf. and usually self-limiting

Sputum:

❖ **Non- colored** (clear or white) uninfected

❖ **Colored** inf.(eg pneumonia)

✓ Pink or red contains blood (hemoptysis) TB

✓ Frothy or bright red heart failure or mitral stenosis.

Treatment

- Non pharmacotherapy:

Lozenges

Humidifiers

Hydration.



- Lozenges soothe the throat and safe for pregnant women and children > 3 years.
- Humidifiers increase moisture in inspired air and soothe the throat.
- Hydration produces less viscous easily expelled secretions. (hydration is used with caution in HF, RF, lower RT inf. Like pneumonia)

pharmacologic treatment

- Cough suppressants
- Expectorants
- Others



Cough suppressants(antitussive-dry cough)

1. Codein and pholcodin:
Centrally acting to increase
cough threshold very effective
For cough.

S.E drowsiness, constipation
(low OTC doses), respiratory
Depression (high doses).

Codein is liable to be abused
Pholcodin lower S.E.

Safety is not established in children
CI asthma, COPD



2- hydrocodone, hydromorphone:

Similar efficacy but greater risk of S.E.

These comp. are metabolized in the liver to morphin, additive CNS suppressant effect if used with alcohol or other CNS suppressants.

3- dextromethorphan:

Non-opioid analogue of levorphanol (a codein analogue), no sedative or respiratory depressive effect or additive properties at usual antitussive doses, but higher doses produce such effects.

Expectorants (protussives-wet in-effective cough)

- Stimulate mucus secretion so inc. liquification of sputum and easy to expel

✓ Guaifenesin (glyceryl quiacolate)

S.E: NV, dizziness, headache.

✓ Ipecacuanha

✓ Ammonium chloride Or bicarbonate

S.E vomiting, acidosis, unpleasant taste.

Expectorants are not used for asthma, COPD, smokers.

others

- Antihistamines (diphenhydramine) dry cough: S.E sedation, anticholinergic (dry mouth, blurred vision, urinary incontinence, respiratory depression, the non-sedating antihistamine (loratidine) lacks the anti-tussive effect. In children it may cause excitability.

- Sympathomimetics (pseudoephedrin and phenylpropanolamin)

Included in cough mixtures for their bronchodilator and decongestant effect but has a stimulant effect and may cause insomnia if taken close to bed time

Stimulate the heart (inc. BP)

Alter diabetic control



- Theophyllin

Included in cough mixtures for bronchodilatory effect, narrow therapeutic index

Cimetidin, erythromycin increases its action

Smoking, CMZ, phenytoin reduce its level

S.E CNS, GIT, CV.

