cetirizine (selt-z-ri-zine)

- Alle Holst, Zyrtec, Zyrtec, 2010

Classification
Therapeutic: allergy, cold, and cough remedies, antihistamines
Pharmacologic: piperazines (peripherally selective)

Pregnancy Category B

Indications
Relief of allergic symptoms caused by histamine release including: Seasonal and perennial allergic rhinitis, Chronic urticaria.

Action
Antagonizes the effects of histamine at H1-receptor sites; does not bind to or inactivate histamine. Anticholinergic effects are minimal and sedation is dose related.

Therapeutic Effects: Decreased symptoms of histamine excess (sneezing, rhinorrhea, ocular tearing and redness, pruritus).

Pharmacokinetics
Absorption: Well absorbed following oral administration.
Distribution: Unknown.
Protein Binding: 93%.
Metabolism and Excretion: Excreted primarily unchanged by the kidneys.
Half-life: 7.4–9 hr (in children to 6.2 hr, in renal impairment up to 19–21 hr).

TIME/ACTION PROFILE (antihistaminic effects)

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Contraindications/Precautions
Contraindicated in: Hypersensitivity to cetirizine, hydroxyzine or any component; Lactation: Excreted in breast milk, not recommended for use.

Use Cautiously in: Patients with hepatic or renal impairment (dose recommended if CCr < 31 mL/min or hepatic function is impaired); OB, Pedi: Safety not established for pregnant women or children <6 mo; Geri: Initiate at lower doses.

Adverse Reactions/Side Effects
CNS: dizziness, drowsiness (significant with doses >10 mg/day), fatigue.

Drug-Drug: Additive CNS depression may occur with alcohol, opioid analgesics, or sedatives/hypnotics. Theophylline may prolong half-life.

Route/Dosage
PO (Adults and Children >6 yr): 5–10 mg given once or divided twice daily.
PO (Children 2–5 yr): 2.5 mg given once daily, may be qd or 5 mg qd daily or 2.5 mg every 12 hr.
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PO (Children 6–11 mo): 2.5 mg once daily.

Hepatic/Renal Impairment
PO (Adults and Children >12 yr): CCr <31 mL/min, hepatic impairment or hemodialysis—5 mg once daily.
Hepatic/Renal Impairment
PO (Children >12 yr): use not recommended.

NURSING IMPLICATIONS
Assessment
● Assess allergy symptoms (rhinitis, conjunctivitis, hives) before and periodically during therapy.
● Assess lung sounds and character of bronchial secretions. Maintain fluid intake of 1500–2000 mL/day to decrease viscosity of secretions.
● Lab Test Considerations: May cause false-negative results in allergy skin tests.

Potential Nursing Diagnoses
Indirect effects (discontinue use; indications for therapy (Adverse Reactions))

Implementation
● Do not confuse cetirizine with loratadine. Do not confuse Tylenol (acetaminophen) with Elpisite (acetaminophen), Zantac (ranitidine), Zocor (simvastatin).

Pharmacodynamics
Cetirizine is a non-sedating H1-antihistamine that is rapidly absorbed from the GI tract. It is highly protein-bound and extensively metabolized by the liver. The primary metabolite is desethylcetirizine. Cetirizine is eliminated primarily in the urine as the parent compound. The elimination half-life is 7.4–9 hr in adults and children >6 yr, 6.2 hr in children 2–5 yr, and 19–21 hr in children 1–2 yr. The half-life is prolonged in children with renal impairment (to 19–21 hr) and in adults with hepatic impairment (to 19–21 hr). Cetirizine is highly bound to plasma proteins. Cetirizine is metabolized by the cytochrome P450 3A4 system to inactive metabolites, desethylcetirizine, and N-desethyl-hydroxyzine. The parent compound and its metabolites are excreted primarily in the urine as the parent compound. Cetirizine is not significantly excreted in breast milk.

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Cetirizine, Zyrtec (cetirizine/pseudoephedrine), Zyrtec Itchy Eye Drops (ketotifen fumarate).

PO: Administer once daily without regard to food.

Patient/Family Teaching

- Instruct patient to take medication as directed.
- May cause dizziness and drowsiness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Advise patient to avoid taking alcohol or other CNS depressants concurrently with this drug.
- Advise patient that good oral hygiene, frequent rinsing of mouth with water, and use of sugarless gum or candy may minimize dry mouth. Patient should notify dentist if dry mouth persists >2 wk.
- Instruct patient to contact health care professional if dizziness occurs or if symptoms persist.

Evaluation/Desired Outcomes

- Decrease in allergic symptoms.

Why was this drug prescribed for your patient?