rifapentine (rif-a-pen-teen)

Classifications
Therapeutic: antituberculars

Pregnancy Category: C

Indications
Treatment of pulmonary tuberculosis. Must be used in combination with other agents.

Action
Inhibits DNA-dependent RNA polymerase. Therapeutic Effects: Bactericidal action against intracellular and extracellular susceptible strains of Mycobacterium tuberculosis.

Pharmacokinetics
Absorption: 70% absorbed following oral administration.

Distribution: Widely distributed in body tissues and fluids.

Protein Binding: Rifapentine—97.7%; desacetyl rifapentine—93.2%.

Metabolism and Excretion: Mostly metabolized by the liver; 17% excreted by the kidneys; some conversion to another active compound (25-desacetyl rifapentine).

Half-life: 13 hr (rifapentine and desacetyl rifapentine).

TIME/ACTION PROFILE (blood levels)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>5–6 hr</td>
<td>unknown</td>
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Contraindications/Precautions
Contraindicated in: Hypersensitivity to rifapentine or other rifamycins (rifampin or rifabutin).

Use Cautiously in: History of liver disease; OB, Lactation, Pedi: Pregnancy, lactation, or children < 12 yr (safety not established).

Exercise Extreme Caution in: Concurrent protease inhibitor therapy.

Adverse Reactions/Side Effects
CNS: dizziness, headache.
Resp: hemoptysis.
CV: hypertension.
GI: PSEUDOMEMBRANOUS COLITIS, anorexia, diarrhea, dyspepsia, q liver enzymes, nausea, vomiting.
GU: hematuria, proteinuria, pyuria, urinary casts.
Derm: acne, pruritus, rash.
Hemat: anemia, leukopenia, lymphopenia, neutropenia, thrombocytosis.
Misc: pain.

Interactions
Drug-Drug: May increase levels of phenytoin, disopyramide, mexiletine, quinidine, clarithromycin, dapsone, doxycycline, quinolones, rifabutin, trimethoprim, sulfonamide. May increase levels of warfarin, fluconazole, itraconazole, ketoconazole, nelfinavir, saquinavir; dosage adjustments may be necessary. Amiodarone: Decreases absorption.

Route/Dosage
Must be used in combination with other antituberculars.

PO (Adults): Intensive phase—600 mg twice weekly (not less than 72 hr between doses) for 2 mo; continuation phase—600 mg once weekly for 4 mo.

NURSING IMPLICATIONS
Assessment
- Microbiological studies and susceptibility tests should be performed prior to and periodically throughout therapy to detect possible resistance.
- Assess lung sounds and character and amount of sputum periodically throughout therapy.
- Monitor bowel function. Diarrhea, abdominal cramping, fever, and bloody stools should be reported to health care professional promptly as a sign of pseudomembranous colitis. May begin up to several weeks following cessation of therapy.
- Lab Test Considerations: Assess hepatic enzymes, bilirubin, CBC, and platelet count prior to therapy. Monitor at least monthly, especially in relation to adverse effects.

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reactions. Patients with liver disease or abnormal liver tests should have liver tests (especially AST and ALT) monitored every 2–4 weeks. Signs of worsening disease may require discontinuation.

- May interfere with methods for determining serum folate and vitamin B levels and with urine tests based on color reactions.
- Hyperuricemia is common during intensive phase, especially when combined with pyrazinamide.

Potential Nursing Diagnoses
Risk for infection (Indications)
Noncompliance (Patient/Family Teaching)

Implementation
- Rifapentine is not administered alone. When used with isoniazid, pyridoxine (vitamin B) is administered concurrently in patients who are malnourished, predisposed to neuropathy (patients with alcoholism or diabetes), or adolescents to prevent neuropathy.
- PO: May be administered with food to minimize nausea, vomiting, or GI upset.
- Antacids should not be administered within 1 hr before or 2 hr after rifapentine.

Patient/Family Teaching
- Advise patient to take medication exactly as directed, not to skip doses or double up on missed doses of daily companion medications. Emphasize the importance of continuing therapy even if all symptoms have subsided. Length of therapy for tuberculosis depends on regimens being used and underlying disease state.
- Advise patient to notify health care professional promptly if fever, malaise, rash, itching, inflamed or red eyes and skin, nausea, vomiting, anorexia, or pain or swelling of joints occur.
- Instruct patient to notify health care professional if fever and diarrhea develop, especially if stool contains blood, pus, or mucus. Advise patient not to treat diarrhea without consulting health care professional.
- Instruct patient to avoid the use of alcohol during the therapy, because this may increase the risk of gastrointestinal (GI) distress.
- Rifapentine may occasionally cause dizziness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Inform patient that saliva, sputum, teeth, tongue, sweat, tears, CSF, urine, and feces may become red-orange, and that soft contact lenses may become permanently discolored.

Evaluation/Desired Outcomes
- Decreased fever and night sweats.
- Diminished cough and sputum production.
- Negative sputum cultures.
- Increased appetite.
- Weight gain.
- Relief of fatigue.
- Increased sense of well-being in patients with tuberculosis.

Why was this drug prescribed for your patient?