**dirithromycin** (di-rith-roe-my-e-sin)

**Drug Class**

Therapeutic: anti-infectives
Pharmacologic: macrolides

**Indications**

Treatment of the following infections: Acute bacterial exacerbations of chronic bronchitis due to *Hemophilus influenzae*, *Moraxella catarrhalis*, or *Streptococcus pneumoniae*, Secondary bacterial infections of acute bronchitis due to *Hemophilus influenzae* or *Streptococcus pneumoniae*, Community-acquired pneumonia due to *Legionella pneumophila* or *Haemophilus influenzae* or *Streptococcus pneumoniae*, or *S. pneumoniae*, Pneumonia (causal pathogens due to *Streptococcus pneumoniae*), Uncomplicated skin/skin structure infections due to methicillin-susceptible strains of *S. aureus* or *S. pyogenes*.

**Action**

Suppresses protein synthesis at the level of the 50S bacterial ribosome. Therapeutic Effects: Bacteriostatic action against susceptible bacteria. Spectrum: Active against gram-positive aerobes including: *S. aureus* (methicillin-susceptible), *S. pneumoniae* and *S. pyogenes*. Active against gram-negative aerobes, including: *H. influenzae*, *L. pneumophila*, *M. catarrhalis*. Also active against *M. pneumoniae*.

**Pharmacokinetics**

Absorption: Dirithromycin is a pro-drug. It is converted to erythromycylamine, the active compound, during intestinal absorption, resulting in bioavailability of 10%.

Distribution: Erythromycylamine—rapidly and widely distributed, resulting in high tissue concentrations.

Metabolism and Excretion: Erythromycylamine—81–97% eliminated in bile (fecal/hepatic route); 2% eliminated in urine.

Half-life: Erythromycylamine—2–36 hr.

**TIME/ACTION PROFILE (blood levels†)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
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<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>4hr</td>
<td>24 hr</td>
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</tbody>
</table>

†Of erythromycylamine

**Contraindications/Precautions**

Contraindicated in: Hypersensitivity to dirithromycin, erythromycin, or other macrolide anti-infectives; Known, suspected, or potential bacteremia (serum levels are inadequate).

Use Cautiously in: Moderate or severe hepatic impairment; Pregnancy, lactation, or children <12 yr (safety not established).

**Adverse Reactions/Side Effects**

CNS: dizziness/vertigo, headache, insomnia, weakness. Resp: dyspnea, increased cough.


**Interactions**

**Drug-Drug:** Absorption slightly decreased when used with antacids or H₂-receptor antagonists. May decrease blood levels of triazolam, digoxin, warfarin, ergotamine, cyclosporine, calcium channel blockers, phenytoin, bromocriptine, valproic acid, lovastatin, and simvastatin.

**Route/Dosage**

**PO (Adults and Children ≥12 yr):** 500 mg/day as a single dose for 5–14 days (duration depends upon the indication).
Potential Nursing Diagnoses
Risk for infection (Indications) (Side Effects)
Deficient knowledge, related to medication regimen (Patient/Family Teaching)
Noncompliance (Patient/Family Teaching)

Implementation
PO: Administer with food or within 1 hr of having eaten. Tablets should be swallowed whole; do not crush, break, or chew.

Patient/Family Teaching
Instruct patients to take medication exactly as directed and to finish the drug completely, even if feeling better. Advise patients that sharing of the medication may be dangerous.

Advises patient to report the signs of superinfection (black, furry overgrowth on the tongue, vaginal itching or discharge, fever, or foul-smelling stools).

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.

Advise patient to notify health care professional if pregnancy is planned or suspected.

Instruct the patient to notify health care professional if symptoms do not improve within a few days.

Evaluation/Desired Outcomes
Resolution of the signs and symptoms of infection. Length of time for complete resolution depends on the organism and site of infection.

Why was this drug prescribed for your patient?