**Ritonavir (rit-o-nav-ir)**

**Notes**

**Classification**

Therapeutic: antiretrovirals

Pharmacologic: protease inhibitors

**Pregnancy Category:** B

**Indications**

HIV infection (with other antiretrovirals).

**CONTRAINDICATIONS**

- Contraindicated in:
  - Nonfasting: PO rapid 4 hr* 12 hr

**ROUTE ONSET PEAK DURATION**

- 3–5 hr.

**Pharmacokinetics**

**Increased CD4 cell counts and decreased viral load with**

- **Therapeutic Effects:** Inhibits the action of HIV protease and prevents the cleavage of viral polyproteins.

**Therapeutic Classification**

Norvir

(ritonavir)

**Drug Interactions**

- Increased CD4 cell counts and decreased viral load with

- **Interactions**

  **Antiretrovirals**

  **Recommended in HIV-infected patients.**

  **Contraindicated in:**

  - Contraindicated in:
    - Nonfasting: PO rapid 4 hr* 12 hr

  **CNS:**

  - Seizures, abnormal thinking

  **CV:**

  - Spasm.

  **Endo:**

  - Anorexia

  **EENT:**

  - Pharyngitis, throat irritation.

  **GI:**

  - Vomiting, constipation, diarrhea.

  **GU:**

  - Urinary tract stimulation.

  **MS:**

  - Weakness

  **Resp:**

  - Bronchoconstriction, wheezing, cough.

  **Metab:**

  - Hyperlipidemia.

  **F and E:**

  - Sodium, potassium.

  **Derm:**

  - Angioedema, bronchospasm, rash, skin eruptions, sweating, urticaria.

  **Misc:**

  - Fat redistribution, fever, immune reconstitution syndrome.

  **SPECIAL CONSIDERATIONS**

  **Use Cautiously:**

  - Impaired hepatic function, history of hepatitis, Diabetes mellitus, history of bleeding, portal hypertension, liver disease, concomitant use of certain drugs.

  **Pregnancy:**

  - Category B

  **Adverse Reactions/Side Effects**

  **CNS:**

  - Headache, confusion, malaise, hyperesthesia.

  **CV:**

  - Hypotension, tachycardia.

  **GI:**

  - Nausea, vomiting.

  **Hematologic:**

  - Thrombocytopenia.

  **Local:**

  - Injection site reactions.

  **Musculoskeletal:**

  - Myalgia.

  **Respiratory:**

  - Bronchospasm.

  **Skin:**

  - Rash, rash/pruritus.

  **Other:**

  - Stomatitis, fatigue.

**Contraindications/Precautions**

- Contraindicated in:

  - Impaired hepatic function, history of hepatitis, Diabetes mellitus, portal hypertension (cirrhosis), severe hepatic disease, concomitant use of certain drugs.

**Pregnancy:**

- Category B

**Drug Interactions**

- Increased CD4 cell counts and decreased viral load with

**Precautions**

- Increased CD4 cell counts and decreased viral load with

**Side Effects**

- Increased CD4 cell counts and decreased viral load with

**Adverse Reactions/Side Effects**

- Increased CD4 cell counts and decreased viral load with

**Drug Interactions**

- Increased CD4 cell counts and decreased viral load with

**Precautions**

- Increased CD4 cell counts and decreased viral load with

**Side Effects**

- Increased CD4 cell counts and decreased viral load with
NURSING IMPLICATIONS

Assessment
- Assess patient for change in severity of HIV symptoms and for symptoms of opportunistic infections during therapy.
- Assess patient for rash (mild to moderate rash usually occurs in the 2nd wk of therapy and resolves within 1–2 wk of continued therapy). If rash is severe (extensive erythematous or maculopapular rash with moist desquamation or angioedema) or accompanied by systemic symptoms (serum sickness-like reaction, Stevens-Johnson syndrome, toxic epidermal necrolysis), therapy must be discontinued immediately.

Implementation
- Do not confuse ritonavir with Retrovir (zidovudine).
- PO: Administer with a meal or light snack.
- Oral powder may be mixed with chocolate milk, suck, or administer within 1 hr of dosing to improve taste. Use calibrated oral dosing syringe for oral solution. Oral solution does not require refrigeration if used within 30 days and stored below 77°F in the original container. Keep cap tightly closed. Tablet should be swallowed whole; do not crush, break, or chew. Store at room temperature.
- Capsules should be stored in the refrigerator and protected from light.
- Do not double doses.
- Instruct patient to take missed doses as soon as remembered, do not double dose.

Potential Nursing Diagnoses

Risk for infection (Indications)
- Noncompliance (Patient/Family Teaching)
- Risk for infection

Lab Test Considerations:

- Monitor serum triglycerides and total cholesterol prior to and periodically during therapy.
- Monitor serum levels and may promote resistance; additional antiretroviral therapy is required.

Drug-Natural Products:

- Avoid concurrent use.

Drug-Food: Food

- Avoid concurrent use.

Drug-Natural Products: St. John’s wort

- Avoid concurrent use.

Drug-Food: Food

- Avoid concurrent use.

Drug-Natural Products: Ciclosporine

- Avoid concurrent use.

Drug-Natural Products: Tacrolimus

- Avoid concurrent use.

Drug-Natural Products: Dexamethasone and 10 mg q 72 hr for rosuvastatin

- Avoid concurrent use.

Drug-Natural Products: Clarithromycin, or sildenafil

- Avoid concurrent use.

Drug-Natural Products: Verapamil, or atazanavir

- Avoid concurrent use.

Drug-Food: Food

- Avoid concurrent use.

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Drug-Food: Food

- Avoid concurrent use.
ritonavir

- Instruct patient that ritonavir should not be shared with others.
- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Advise patient that ritonavir does not cure AIDS or prevent associated opportunistic infections. Ritonavir does not reduce the risk of transmission of HIV to others through sexual contact or blood contamination. Caution patient to use a condom during sexual contact and to avoid sharing needles or donating blood to prevent spreading the AIDS virus to others. Advise patient that the long-term effects of ritonavir are unknown at this time.
- Advise patient that ritonavir may cause hyperglycemia. Advise patient to notify health care professional if increased thirst or hunger, unexplained weight loss, increased fatigue, muscle or joint pain, or dry, itchy skin occurs.
- Instruct patient to notify health care professional immediately if rash occurs.
- Inform patient that redistribution and accumulation of body fat may occur, causing central obesity, dorsocervical fat enlargement (buffalo hump), peripheral wasting, breast enlargement, and cushingoid appearance. The cause and long-term effects are not known.
- Advise patients taking oral contraceptives to use a nonhormonal method of birth control during ritonavir therapy. Patient should avoid breast feeding.
- Emphasize the importance of regular follow-up exams and blood counts to determine progress and monitor for side effects.

Evaluation/Desired Outcomes
- Delayed progression of AIDS and decreased opportunistic infections in patients with HIV.
- Decrease in viral load and improvement in CD4 cell counts.

Why was this drug prescribed for your patient?

- C = Common drug name
- G = Genetic implication
- OPT/OK indicates less-than-OK severity; underline indicates most frequent
- Discontinued