

Faropenem Tablets

FAROBACT 200

COMPOSITION

FAROBACT 200 Tablets

Each film-coated tablet contains:

Faropenem Sodium equivalent to

Faropenem 200 mg

DOSAGE FORM

Oral tablet

PHARMACOLOGY

Pharmacodynamics

Faropenem is bactericidal, with a strong affinity for the high molecular penicillin-binding proteins (PBPs) of the cell wall, which is essential for the multiplication of bacilli; it, thus, acts by inhibiting the cell wall synthesis. Faropenem shows broad antibacterial activity against both aerobic and anaerobic Gram-positive and Gram-negative bacteria. Faropenem is highly stable against various beta-lactamases and binds preferentially to the PBPs, 2 and 1A, of *Escherichia coli* (*E. coli*)

Microbiology

Faropenem was found to be active against *Enterococcus faecalis*, oxacillin-susceptible *Staphylococci*, *Neisseria gonorrhoeae*, *Neisseria meningitides*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Streptococcus pyogenes*, *Staphylococcus saprophyticus*, *Staphylococcus epidermidis*, Group A *Streptococci*, Group B *Streptococci*, *Streptococcus milleri*, *Streptococcus viridans*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Enterococcus faecium*, *E. coli*, *Klebsiella spp.*, *Proteus mirabilis*, *Citrobacter spp.*, *Salmonella spp.*, *Shigella spp.*, *Providentia stuartii*, *Bacteroides fragilis*, *Clostridium perfringens*, and *Peptostreptococcus spp.*

Faropenem was less active against the following:

Citrobacter freundii, *Proteus mirabilis*, *Enterobacter spp.*, *Proteus vulgaris*, and *Morganella morganii*.

Pharmacokinetics

Absorption

After a single oral dose of faropenem in fasting healthy volunteers at 150, 300, and 600 mg, the plasma levels of faropenem reached C_{max} of 2.4, 6.2, and 7.4 mg/ml, respectively, at about 1–1.5 hours (T_{max}). The AUCs of faropenem were 3.94, 11.73, and 19.59 $\mu\text{g}\cdot\text{h}/\text{ml}$. These C_{max} and AUCs were proportional to the doses, and the respective urinary recoveries were 3.12%, 6.78%, and 5.26% of

the dose. The half-life of faropenem is about 1 hour, irrespective of the dosage quantity.

At a single dose of 300 mg in normal healthy adults after meals, the average T_{max} was delayed by about 1 hour, but C_{max} , AUC and urinary recovery were not different from those in the fasting state. In a multiple dose study with 400 mg t.i.d., the C_{max} on days 1, 4, and 7 (1st, 10th and 19th administration) were 5.5, 4.3, and 4.8 mg/ml, respectively. The respective AUCs were 12.5, 10.1, and 12.2 mg.h/ml, demonstrating no cumulative effect.

Average pharmacokinetic parameters of faropenem on single- dose administration on empty stomach in normal healthy adults (average \pm SD)

	n	C_{max} (μ g/ml)	T_{max} (h)	$T_{1/2}$ (h)	AUC
150 mg/person (empty stomach)	6	2.36 ± 1.01	0.96 ± 0.46	0.76 ± 0.14	3.95 ± 2.06
300 mg/person (empty stomach)	6	6.24 ± 2.86	1.04 ± 0.40	0.85 ± 0.23	11.73 ± 8.34
600 mg/person (empty stomach)	6	7.37 ± 1.97	1.42 ± 0.49	1.08 ± 0.19	19.59 ± 6.37

Distribution

Faropenem was found in the sputum of patients, fluid that oozes at the time of tooth extraction, tonsil tissues, maxillary sinus, mucous membrane tissues, female genital organ tissues, eyelids, subcutaneous cell tissues and prostate tissues.

Metabolism and Excretion

Before excretion in the urine, the absorbed faropenem gets metabolized by dehydropeptidase-I (DHP I), which is present in the kidneys. The metabolites are found in the blood and the urine. The metabolites do not demonstrate antibacterial activity. Faropenem is primarily excreted through the kidneys and the rate of excretion in the urine (0 ~ 24 hours) of 150, 300, and 600 mg (given on an empty stomach to normal healthy adults) was 3.1 ~ 6.8%. The highest concentration in the urine was 21.7, 55.6, and 151.5 mg/ml, respectively, in 0–2 hours; after 12 hours, it was almost reduced to nil.

INDICATIONS

FAROBACT 200 Tablets are indicated in the treatment of the following infections:

Lower respiratory tract infections: Eg, acute bronchitis, pneumonia, pulmonary suppuration.

Ear, nose and throat (ENT) infections: Eg, otitis externa, tympanitis, sinusitis.

Genito-urinary infections: Eg, pyelonephritis, cystitis, prostatitis, seminal gland inflammation.

Upper respiratory tract infections: Eg, pharyngitis, tonsillitis.

Skin and skin structure infections: Eg, pustular acne, folliculitis, contagious impetigo, erysipelas, lymphangitis, suppurative nail inflammation, subcutaneous abscess, hidradenitis (sweat gland inflammation), infective sebaceous cyst, chronic pyoderma, secondary infection of external wounds or surgical wound.

Gynecological infections: Eg, adnexitis, bartholin gland inflammation.

DOSAGE AND ADMINISTRATION

Indication	Dosage
Lower respiratory tract infections	200 mg t.i.d., can be increased to 300 mg t.i.d.
ENT infections	200 mg t.i.d., can be increased to 300 mg t.i.d.
Genito-urinary infections	200 mg t.i.d., can be increased to 300 mg t.i.d.
Upper respiratory tract infections	150 mg t.i.d., can be increased to 200 mg t.i.d.
Skin and skin structure infections	150 mg t.i.d., can be increased to 200 mg t.i.d.
Gynecological infections	150 mg t.i.d., can be increased to 200 mg t.i.d.

Duration of treatment: The duration of treatment depends upon the severity of infection, clinical response and bacteriological findings.

CONTRAINDICATIONS

Faropenem is contraindicated in patients with known hypersensitivity to any of the components of this product or to other drugs in the same class, or in patients who have demonstrated anaphylactic reactions to beta-lactams.

WARNINGS AND PRECAUTIONS

Faropenem should be administered with caution in the following:

1. Patients with a past history of hypersensitivity to penicillin, cephem or carbapenem drugs.
2. Patients with a family history of atopy.
3. Patients with renal impairment. The dosage should be reduced or the interval between doses should be increased.
4. Geriatric patients.

5. Patients with poor oral intake or poor general state (since there are cases that show symptoms of vitamin K deficiency, proper monitoring should be done).

Drug Interactions

Imipenem and cilastatin sodium combination: It has been reported that in animal studies (rat), the concentration of faropenem in the blood increases. It is due to the obstruction of metabolic fermentation by cilastatin.

Furosemide: It has been reported in animal studies (dog), that the kidney toxicity of faropenem increases.

Sodium valproate: It has been reported that due to joint usage with carbapenem drugs (meropenem, panipenem and imipenem-cilastatin sodium), the concentration of valproic acid in the blood reduces, and there is a recurrence of epileptic fits.

Renal Impairment

In patients with renal impairment, it was found that the plasma concentrations of the drug are increased and the half-life is extended.

Pregnancy

Safety regarding therapy during pregnancy has not been established. In pregnant women or expectant mothers, the medicine should be given only if the benefits of the treatment are greater than the risks involved.

Lactation

Faropenem is excreted in human milk. Therefore, faropenem should be given to nursing mothers only if the benefits outweigh the risks.

Pediatric Use

Safety regarding therapy in infants has not been established.

Geriatric Use

The half-life of faropenem is prolonged in the elderly and this may be due to a decline in kidney functions, which results in high plasma concentrations. Therefore, in the elderly, start with a dose of 150 mg and monitor the patient for any undesirable effects.

If diarrhea and loose bowel movements appear, stop the medicine, monitor correctly and take appropriate measures. There is a tendency of hemorrhage due to vitamin K deficiency in the elderly.

UNDESIRABLE EFFECTS

Faropenem is generally well tolerated. The most frequently reported adverse reactions are diarrhea, abdominal pain, loose bowel movements, nausea and rash.

The following adverse reactions have also been observed:

- Shock, pseudoanaphylactic symptoms: Feeling of discomfort, wheezing, breathing trouble, dizziness, feeling a need to evacuate the bowel, ringing in the ear, sweating, flushing of the whole body, vascular edema, low blood pressure.
- Acute renal impairment.
- Serious colitis accompanied by pseudomembranous colitis: Bloody stool, stomachache, frequent diarrhea.
- Mucocutaneous ocular syndrome (Stevens-Johnson syndrome), toxic epidermal necrosis (Lyell syndrome).
- Interstitial pneumonia: Pyrexia, cough, breathing trouble, abnormalities in the chest X-ray. If these symptoms appear, appropriate measures should be taken, such as administration of an adrenal cortical hormone.
- Liver function disorder, jaundice: An increase in AST (SGOT), ALT (SGPT), ALP, etc.
- Agranulocytosis.
- Striated muscle softening: Muscular pain, feeling of exhaustion, increase in CK (CPK), increase in myoglobin in the blood and in the urine, and subsequently, acute renal impairment.
- Pulmonary infiltration with eosinophilia (PIE) syndrome: Pyrexia, cough, breathing trouble, abnormalities in the chest X-ray and eosinophilia. If these symptoms appear, appropriate measures should be taken, such as administration of an adrenal cortical hormone.
- Hypersensitivity reactions: Rash, pyrexia, redness, hives, red spots on the skin, etc.
- Abnormal laboratory findings: Eg, increases in liver function tests (ALT, AST, bilirubin, LDH, etc.), eosinophilia, increase in BUN-creatinine, changes in granulocyte and platelets.
- Vitamin deficiency: Symptoms of vitamin K deficiency (low prothrombin, tendency of hemorrhage, etc). Symptoms of vitamin B-group deficiency (inflammation of the tongue, stomatitis, lack of appetite, neuritis, etc.) might occur rarely.
- Gastrointestinal disorders: Vomiting, stomachache, diarrhea, lack of appetite, gastritis, constipation, inflammation of the corners of the mouth and lips, stomatitis.
- Others: Burning sensation, headache, dizziness, drowsiness, edema, dryness of the mouth and lips, change in nail color, and a washed-out feeling, all of them can occur rarely.

OVERDOSAGE

No specific information is available on the treatment of overdose with faropenem. Intentional overdosing of faropenem is unlikely. In the event of an

overdose, faropenem should be discontinued and general supportive treatment given until renal elimination takes place.

STORAGE AND HANDLING INSTRUCTIONS

Store in a cool, dry place. Protect from moisture.

PACKAGING INFORMATION

FAROBACT 200 Tablets -----Strip pack of 6 tablets

Last updated: June 2010