1. NAME OF THE MEDICINAL PRODUCT

Cefi-Q 400mg Capsules

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each Capsule Contains:
Cefixime ……..400mg
(As Cefixime Trihydrate)

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

A hard gelatin capsule of size '0' with print of 'Maxpan' and '400' on Dark blue color cap and white body, containing light yellow granular powder

4. CLINICAL DATA

4.1. Therapeutic indications

Cefi-Qis indicated for the treatment of the following infections caused by susceptible microorganisms
Acute exacerbation of chronic bronchitis
Acute otitis media

Sinusitis Aguda

Uncomplicated acute

cystitis

Uncomplicated pyelonephritis

4.2. Dosage and method of administration

Posology

Adults
The recommended dosage for adults is 400 mg daily, either as a single dose or in two 200 mg doses every 12 hours.

elderly patients
Elderly patients can receive the same dose as recommended for adults. Renal function should be assessed, and the dosage adjusted in case of severe renal impairment (see "Dosage in renal failure" and section 4.4).

Adolescents 12 years of age and older
They should receive the recommended dose for adults (400 mg daily, either as a single dose or as two 200 mg doses every 12 hours).

Children under 12 years of age

The pharmaceutical form in capsules is not suitable for children under 12 years of age.
Renal insufficiency
Cefixime can be administered to patients with impaired renal function. In patients with creatinine clearance of 20 ml/min or more, the normal dose can be administered in the usual schedule.
If creatinine clearance is less than 20 ml/min, it is recommended not to exceed a dose of 200 mg once daily. In patients receiving chronic ambulatory peritoneal dialysis or hemodialysis, the dose and schedule
recommended for patients with creatinine clearance less than 20 mL/min should be used.

There are insufficient data regarding the use of cefixime in pediatric and adolescent patient groups in the presence of impaired renal function. Therefore, the use of cefixime in these patient groups is not
recommended.

Liver failure
In patients with hepatic insufficiency, the fact that cefixime is not metabolized in the liver makes administration of the preparation possible, without the need to modify the dose.

Treatment duration

The usual duration of treatment is 7 days. It can be kept up to 14 days, depending on the severity of the infection.
In case of uncomplicated cystitis in women, the treatment period is 1-3 days.
Administration method

Orally.
The capsules must be swallowed whole, without chewing and accompanied by a little liquid.
Cefi-Qcan be taken with or without food (see section 5.2).

4.3. Contraindications

Hypersensitivity to the active substance, to other cephalosporins or to any of the excipients listed in section
6.1.

Prior, immediate, or severe hypersensitivity reaction to penicillin or any beta-lactam antibiotic.

4.4. Special warnings and precautions for use

Cefixime should be administered with caution to patients who have shown hypersensitivity to other drugs. Cephalosporins should be used with caution in penicillin-sensitive patients because some data indicate partial cross-allergenicity between penicillins and cephalosporins.

Severe reactions (including anaphylaxis) have been observed to both classes of drugs. Particular caution is indicated in patients who have experienced any type of allergic reaction to penicillins or other beta-lactam antibiotics, because cross-reactions may occur (for contraindications due to known hypersensitivity reactions, see section 4.3).

If severe hypersensitivity reactions or anaphylactic reactions are observed after administration of cefixime, administration should be stopped immediately and appropriate emergency measures should be taken.

Impaired kidney function

Cefixime should be used with caution in patients with creatinine clearance < 20 mL/min (see sections 4.2 and 5.2). There are insufficient data on the use of cefixime in the group of pediatric and adolescent patients in the presence of impaired renal function. Therefore, the use of cefixime in these patient groups is not recommended.

If a combination of cefixime and aminoglycoside preparations, polymyxin B, colistin, or other high-dose loop diuretics (eg, furosemide) are administered, renal function should be monitored because of the likelihood of worsening renal function. impaired kidney function. This requirement is especially valid for patients who already have some limitation of renal function (see section 4.5).

Treatment with cefixime at the recommended dose (400 mg) can significantly alter the normal colonic microbiota and lead to overgrowth of clostridia. Studies indicate that one of the main causes of diarrhea associated with antibacterials is a toxin produced by *Clostridium difficile.* In patients who develop persistent and severe diarrhea during or after treatment with cefixime, the risk of life-threatening pseudomembranous colitis needs to be taken into account. In this case, the administration of cefixime will be suspended and the corresponding therapeutic measures will be adopted. Medicinal products that inhibit intestinal peristalsis are contraindicated (see section 4.8).

If used for a long time, cefixime may cause the growth of microorganisms that are not sensitive.

Severe skin reactions such as drug-induced hypersensitivity syndrome (DRESS syndrome) or blistering skin reactions (toxic epidermal necrolysis, Stevens-Johnson syndrome) have been reported in patients treated with cefixime (see section 4.8). In this case, the administration of cefixime should be discontinued immediately.

4.5. Interaction with other medicinal products and other forms of interaction

If co-administered with potentially nephrotoxic substances (such as aminoglycosides, colistin, polymyxin and viomycin) and strong-acting diuretics (eg ethacrynic acid or furosemide), it induces an increased risk of renal function impairment (see section 4.4). .

Nifedipine, a calcium channel antagonist, can increase the bioavailability of cefixime by up to 70%.

Cefixime administration may reduce the effectiveness of oral contraceptives. That is why it is recommended to take complementary non-hormonal contraceptive measures.

As with other cephalosporins, increases in prothrombin time have been observed in some patients. Therefore, care should be taken in patients receiving anticoagulant therapy.

A false-positive urine glucose reaction can occur with Benedict's or Fehling's solutions or copper sulfate tablets, but not with tests based on enzymatic glucose oxidase reactions.

A false-positive direct Coombs' test result has been reported during treatment with cephalosporins, so it should be noted that a positive Coombs' test result may be due to the drug.

A false-positive reaction for ketones in urine can be obtained with tests using nitroprusside but not with those using nitroferricyanide.

4.6. Fertility, pregnancy and lactation

Pregnancy

Insufficient data are available on the use of cefixime in pregnant women. Animal studies do not indicate direct or indirect harmful effects on pregnancy, embryonal/foetal development, parturition or postnatal development (see section 5.3). As a precautionary measure, cefixime should not be used in pregnant women, unless the doctor considers it essential.

Lactation

It is unknown whether cefixime is excreted in human milk. In non-clinical studies, cefixime has been shown to be excreted in the milk of animals. The decision whether or not to continue breast-feeding or cefixime therapy should be made taking into account the benefit of breast-feeding for the child and the benefit of cefixime therapy for the woman. But until more clinical data become available, cefixime should not be prescribed for women who are breast-feeding.

Fertility

Reproductive studies in mice and rats do not indicate that cefixime has harmful effects with respect to fertility (see section 5.3).

4.7. Effects on ability to drive and use machines

Cefixime has no influence on the ability to drive and use machines.

4.8. Adverse reactions

The following adverse reaction (Preferred term# or equivalent) will be considered listed:

Blood and lymphatic system disorders:	Eosinophilia Hypereosinophilia Agranulocytosis Leucopenia Neutropenia Granulocytopenia Haemolytic anaemia Thrombocytopenia Thrombocytosis
Gastrointestinal disorders:	Abdominal pain Diarrhoea* Dyspepsia

	Nausea Vomiting Flatulence
Hepatobiliary disorders:	Jaundice
Infections and infestations:	Pseudomembranous colitis Vaginitis
Investigations:	Aspartate aminotransferase increased Alanine aminotransferase increased Blood bilirubin increased Blood urea increased Blood creatinine increased
Nervous system disorders:	Dizziness Headache Cases of convulsions have been reported with cephalosporins including cefixime (frequency not known)** Beta-lactams, including cefixime, predispose the patient to encephalopathy risk (which may include convulsions, confusion, impairment of consciousness, movement disorders), particularly in case of overdose or renal impairment (frequency not known)**
Respiratory, thoracic and mediastinal disorders:	Dyspnoea
Renal and urinary disorders:	Acute renal failure with tubulointerstitial nephritis (see section 4.4).
Immune system disorders:	Anaphylactic reaction Angio-oedema Serum sickness-like reaction
Skin and subcutaneous tissue disorders:	Drug rash with eosinophilia and systemic symptoms (DRESS) Erythema multiforme Stevens-Johnson syndrome Toxic epidermal necrolysis Urticaria Rash Pruritus Acute generalised exanthematous pustulosis(AGEP) (see section 4.4)
General disorders and administrative site conditions:	Drug Fever Arthralgia Pyrexia Face oedema Genital pruritus

The above mentioned listed adverse reactions have been observed during clinical studies and/or during marketed use.

4.9. Overdose

There is no experience with cefixime overdose.
Adverse reactions observed with doses up to 2 g of cefixime in normal subjects did not differ from
those observed in patients treated with recommended doses. In case of overdose, gastric lavage may be indicated. There is no specific antidote. Hemodialysis and peritoneal dialysis do not remove cefixime from
the circulation in significant amounts.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: third generation cephalosporin, ATC code: J01DD08
Cefixime is an oral third generation cephalosporin which has marked in vitro bactericidal activity against a wide variety of Gram-positive and Gram-negative organisms.
Clinical efficacy has been demonstrated in infections caused by commonly occurring pathogens including *Streptococcus pneumoniae, Streptococcus pyogenes, Escherichia coli, Proteus mirabilis, Klebsiella* species, *Haemophilus influenzae* (beta-lactamase positive and negative), *Branhamella catarrhalis* (beta-lactamase positive and negative) and *Enterobacter* species. It is highly stable in the presence of beta-lactamase enzymes.
Most strains of enterococci (*Streptococcus faecalis*, group D Streptococci) and Staphylococci (including coagulase positive and negative strains and methicillin-resistant strains) are resistant to cefixime. In addition, most strains of *Pseudomonas, Bacteroides fragilis, Listeria monocytogenes* and *Clostridia* are resistant to cefixime.

5.2 Pharmacokinetic properties

The absolute oral bioavailability of cefixime is in the range of 22 – 54%. Absorption is not significantly modified by the presence of food. Cefixime may therefore be given without regard to meals.
From *in vitro* studies, serum or urine concentrations of 1 mcg/mL or greater were considered to be adequate for most common pathogens against which cefixime is active. Typically, the peak serum levels following the recommended adult or paediatric doses are between 1.5 – 3 mcg/ml. Little or no accumulation of cefixime occurs following multiple dosing.
The pharmacokinetics of cefixime in healthy elderly (age > 64 years) and young volunteers (11 – 35) compared the administration of 400 mg doses once daily for 5 days. Mean C_{max} and AUC values were slightly greater in the elderly. Elderly patients may be given the same dose as the general population.
Cefixime is predominantly eliminated as unchanged drug in the urine. Glomerular filtration is considered the predominant mechanism. Metabolites of cefixime have not been isolated from human serum or urine.
Serum protein binding is well characterised for human and animal sera; cefixime is almost exclusively bound to the albumin fraction, the mean free fraction being approximately 30%. Protein binding of cefixime is only concentration dependent in human serum at very high concentrations which are not seen following clinical dosing.

Transfer of ^{14}C-labelled cefixime from lactating rats to their nursing offspring through breast milk was quantitatively small (approximately 1.5% of the mothers' body content of cefixime in the pup). No data are available on secretion of cefixime in human breast milk. Placental transfer of cefixime was small in pregnant rats dosed with labelled cefixime.

5.3 Preclinical safety data

There are no pre-clinical data of relevance to the prescriber which are additional to that already included in other sections of the Summary of Product Characteristics.

. Pharmaceutical particulars

6.1 List of excipients

Lactose Crystalline
(Monohydrtate)
Microcrystalline
Cellulose-101
Purified Talc
Magnesium Stearate

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

2 years

6.4 Special precautions for storage

Do not store above 30°C.

6.5 Nature and contents of container

Each printed box of Cefi-Q 400mg Capsules contains ALU/PVC blister strips of 5 Capsule (1x 5's Capsules) along with the package Inserts

6.6 Special precautions for disposal and other handling

No special requirements for disposal.

7. Marketing authorisation holder

Indus Pharma (Pvt.) Ltd.
Plots no. 26-27 & 63-67, Sector- 27,
Korangi Industrial Area, Karachi-74900, Pakistan.

8. Marketing authorisation number(s)

036220

9. Date of first authorisation/renewal of the authorisation

Date of first authorisation: 31st -December-2004

10. Date of revision of the text

N/A