Ceftazidime is a drug from the group of cephalosporin antibiotics of the third generation and is designed for parenteral use only. It has demonstrated activity against Gram positive and Gram negative aerobic bacteria, especially against enterococci, including the strains that produce beta-lactamase.

Ceftazidime is used to treat following infections:

- Bacterial meningitis
- Nosocomial pneumonia
- Complicated infection of the soft tissue
- Complicated urinary tract infections
- Complicated intra-abdominal infections

Ceftazidime can be applied as a peri-operative prophylaxis of urinary tract infections in patients who undergo trans-urethral resection of the prostate.

**Precautions**

Ceftazidime should not be used in patients with a known allergy to the cephalosporin or penicillin antibiotics.

Ceftazidime is excreted by the kidneys, and patients who have impaired kidney function must use a reduced dose. It must be carefully administered in combination with other drugs that have known nephrotoxic potential (e.g. gentamicin).
It should not be applied longer than recommended by your doctor because it can lead to an excessive growth of the micro-organism which can develop a certain mechanism of resistance to Ceftazidime.

Ceftazidime, pregnancy and breastfeeding

There are limited data for the use of Ceftazidime in pregnant women.

**FDA Classification: Group B** - Animal studies have shown no direct adverse effects regarding embryonic, fetal and postnatal development.

According to the American Academy of Pediatrics, Ceftazidime is safe for use during breastfeeding. It is excreted into breast milk in small amounts, but it is expected that a therapeutic dose of this medicine have no effects on infants.

Dosage

Recommended dosage for adults and children that weigh more than 40 kg is given in the table below:

<table>
<thead>
<tr>
<th>Indication</th>
<th>Recommended dosage regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronchopulmonary infection that accompanies cystic fibrosis</td>
<td>100-150 mg / kg body weight, divided into three equal doses. The maximum daily dose is 9 grams.</td>
</tr>
<tr>
<td>Complicated urinary tract infection</td>
<td>1-2 g three to four times a day</td>
</tr>
<tr>
<td>Complicated soft tissue infections</td>
<td>1-2 g three times a day</td>
</tr>
<tr>
<td>Complicated intra-abdominal infections</td>
<td>1-2 g three times a day</td>
</tr>
<tr>
<td>Complicated skin infections</td>
<td>1-2 g three times a day</td>
</tr>
<tr>
<td>Peri-operative prophylaxis of infections in trans-urethral resection of the prostate</td>
<td>1 g during the induction of anesthesia and 1 g during catheter removal</td>
</tr>
</tbody>
</table>

This drug can be administered only in a healthcare setting.

Interactions

Like all other antibiotics and Ceftazidime must not be administered simultaneously with vaccines because it can reduce their effectiveness.

Ceftazidime enters into the moderate interactions with the following drugs:

- **Oral contraceptives** (e.g. ethinyl estradiol / levonorgestrel, ethinyl estradiol / desogestrel and ethinyl estradiol / norethindrone). Ceftazidime reduces the effectiveness of these drugs, so it is recommended to use an alternative method of contraception while on Ceftazidime therapy.
- Other nephrotoxic antibiotics, such as: tobramycin, amikacin, and **gentamicin**.
• **Loop diuretics** *(e.g. furosemide and torasemide)*, which are also known for their nephrotoxic potential.
• Chloramphenicol *(bacteriostatic antibiotic)*. Taking the bacteriostatic agent such as chloramphenicol concomitantly with Ceftazidime leads to reduced efficiency of Ceftazidime.

### Side effects

Ceftazidime may cause the following side effects:

- Higher than normal level of eosinophils in the blood *(also called eosinophilia)*
- Increased number of platelets in the blood *(also called thrombocytosis)*
- Candidiasis *(that may affect oral cavity and vaginal mucous membrane)*
- Decreased number of platelets in the blood *(also called thrombocytopenia)*
- Decreased number of leukocytes in the blood *(also called leucopenia)*
- Hemolytic anemia
- Erythema multiforme
- Diarrhea
- Phlebitis
- Acute renal failure
- Interstitial nephritis
- Allergy