

DEPARTMENT OF PHARMACOLOGY- NEW DRUG UPDATE

Imipenem + Cilastatin + Relebactam

- It's a triple drug combination of Imipenem, Cilastatin, Relebactam.
- Approved by US-FDA on 16th July 2019
(Brand name: RECARBRIO)

Mechanism of Action

- **Imipenem**- a beta lactam antibiotic, which inhibits bacterial cell-wall synthesis by binding to penicillin-binding proteins(PBP 2 and PBP1B) in Enterobacteriaceae and *Pseudomonas aeruginosa*.
- **Cilastatin**- a renal dehydropeptidase inhibitor limits the renal metabolism of Imipenem.
- **Relebactum**- a betalactamase inhibitor,which protects Imipenem from degradation by certain serine beta lactamases such as Sulhydryl variable (SHV), Temoneira (TEM), Cefotaximase-Munich (CTX-M), *Enterobacter cloacae* (P99), *Pseudomonas*-derived caphalosporinase (PDC) & *Klebsiella-pneumoniae* carbapenemase (KPC).

Indications

- Complicated intra-abdominal infections
- Urinary tract infections

Dosage and Administration

RECARBRIO 1.25 grams
(Imipenem 500mg, Cilastatin 500mg, Relebactam 250 mg) can be administered as **intravenous (IV) infusion** over 30 minutes every 6 hours in patients 18 years of age & older with Creatinine Clearance (CrCl) \geq 90 mL/min.

Warnings

- History of hypersensitivity Reactions
- ↑ Risk for seizure when used concomitantly with,
 - a) Ganciclovir
 - b) Valproic acid

Adverse Effects

- Diarrhea
- Nausea
- Headache
- Vomiting
- ↑ALT, AST
- Phlebitis/infusion site reactions
- Pyrexia
- Hypertension

Bibliography

FDA approves new treatment for complicated urinary tract and complicated intra-abdominal infections". Food and Drug Administration. July 17, 2019.

