

Fidaxomicin

Fidaxomicin is a macrocyclic antibiotic and is the only drug in this class available in the UK.

Mechanism of Action

- Bactericidal against *Clostridium difficile*
- Inhibits bacterial RNA polymerase preventing RNA synthesis
- May also inhibit spore formation by *Clostridium difficile*

Mechanisms of Resistance

- Mutation of active site therefore antibiotic does not bind

Pharmacology and Pharmacodynamics

- Fidaxomicin is only available orally and is used for CDAD. It stays in the GI tract and is not absorbed and therefore cannot be used for any other infections
- No dose reduction required in renal or hepatic failure as not absorbed

Spectrum of Activity of Fidaxomicin

Gram-positive	<i>Clostridium difficile</i>
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Cautions and Contraindications

- See BNF for full details
- Use with caution in severe CDAD as insufficient data available
- History of previous hypersensitivity reaction or allergy to macrolide antibiotics
- Renal and hepatic failure (use with caution as no data available)
- Pregnancy and breast feeding (avoid unless benefit outweighs risk)
- Drugs
 - Increased Fidaxomicin activity when given with Ciclosporin, Verapamil, macrolides and antiarrhythmics

Side Effects

- Gastrointestinal disturbance (nausea and vomiting)
- Hypersensitivity reaction
- Rash

Monitoring

Check daily for worsening of CDAD