

SA expert Advisory Group on Antimicrobial Resistance POSITION STATEMENT

Use of oral antibiotics prior to colorectal surgery

There is some evidence to suggest that the use of oral antibiotics in combination with intravenous antibiotics prior to elective colorectal surgery may lead to improved outcomes in comparison to prophylaxis with intravenous antibiotics only.

Position

- The use of the oral, non-absorbable antibiotic neomycin for gut decolonisation prior to colorectal surgery may be associated with improved outcomes. The published evidence for improved outcomes was greatest in trials where oral antibiotics were combined with mechanical bowel preparation¹.
- It is unclear whether modification of the gut microbiome by oral antibiotics prior to colorectal surgery may lead to decreased efficacy and increased toxicity with subsequent chemotherapy or immunomodulatory therapies²⁻⁴.
- Neomycin 500 mg tablets are on the South Australian Medicines Formulary for this indication and are available via the Special Access Scheme⁵.
- The recommended dose of neomycin is 1 g at 1 pm, 3 pm and 10 pm the day before surgery¹. The maximum quantity to be prescribed is 6 x 500 mg tablets and the patient is to present to a hospital pharmacy to obtain supply.
- Fluoroquinolones (e.g. ciprofloxacin) should be reserved for treatment of proven infection, **not for prophylactic use**. The use of oral ciprofloxacin or oral metronidazole prior to colorectal surgery is not endorsed by SAAGAR. Fluoroquinolones are a class of antimicrobials amongst the most likely to drive antimicrobial resistance. In Australia, fluoroquinolone resistance in *E. coli* blood culture isolates is increasing; 12.5% of *E. coli* isolates in Australian metropolitan sites were resistant to fluoroquinolones in 2017⁶.

References

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