

FACT SHEET

Topical Antimicrobials in Surgical Prophylaxis

Inappropriate use of topical antibiotics may be associated with the emergence of antimicrobial-resistant bacteria in the same way as systemic antibiotics.

Topical antimicrobials (creams or ointments) should not be used as routine post-operative prophylaxis on surgical skin incisions. Well conducted studies have demonstrated no benefit in the prevention of infection after surgical skin incision, and use can be associated with harm (such as skin irritation). This includes topical antibiotics such as chloramphenicol and mupirocin.

Topical antimicrobials play an important role when appropriately used for prophylaxis in certain ophthalmic surgical procedures.

Topical antiseptics such as chlorhexidine can also induce antimicrobial resistance. The use of topical antiseptics should only be used in settings with evidence to support their use.

As evidence to support the effectiveness of using antimicrobial agents intraoperatively as irrigations, pastes or washes for prophylaxis has not yet been established, care should be taken and directions of local Drug and Therapeutic Committees followed.

Therapeutic Guidelines: Antibiotic states that:

"Surgical antibiotic prophylaxis is almost always administered intravenously. Applying antimicrobials (eg ointments, solutions, powders) to the surgical incision to prevent surgical site infection is not recommended, because there is potential for harm (eg hypersensitivity reactions, bacterial resistance) and inadequate evidence to support a benefit. The safety and effectiveness of soaking prosthetic devices in antiseptic or antimicrobial solutions before implantation has not been established and is not recommended."

Resources

<https://www.safetyandquality.gov.au/our-work/antimicrobial-stewardship/surgical-antimicrobial-prophylaxis>

For more information, please visit:

<https://www.safetyandquality.gov.au/our-work/antimicrobial-stewardship>

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