Tilmelding af Foredrag

Foredragets titel

Cefuroxime concentrations in facial artery musculo-muscosal flap, mucosa of the oral cavity, and subcutis: A randomized microdialysis study

Forfatter(e)

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Afdeling/praksis

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Introduktion

Cefuroxime is commonly used as prophylactic antibiotic for the prevention of bacterial infections following oral cavity cancer surgery. Cefuroxime may be administered intravenously as bolus (bolus) or continuous infusion (CI). We aimed to measure and compare free drug concentrations of cefuroxime, administered as either bolus or CI, in three different tissue-compartments (facial artery musculo-muscosal (FAMM) flap, mucosa of the oral cavity, and subcutis) in patients undergoing oral cavity cancer surgery.

Materiale/metode

In total, 16 patients were randomized to receive 1.5g cefuroxime every 8 hour as either bolus or CI. Three microdialysis catheters were placed during surgery; one in the submucosa of both the FAMM-flap and cheek, and one in subcutis parallel to the neck dissection incision. Samples were collected during an eight-hour dosing interval. A treatment target of 70% time with free drug concentrations above the minimal inhibitory concentration (70%T≥MIC) for the MIC target of 4 µg/mL (covering streptococci, Staphylococcus aureus, and Hemophilus influenzae) was applied.

Resultater

Mean T>MIC for cefuroxime was higher after CI compared to bolus administration in mucosa of the oral cavity and subcutis. The mean T>MIC (4 µg/mL) after CI was 100% in all compartments. For bolus infusion, T>MIC was in the range of 90-100%. The 70%T≥MIC target was achieved in all compartments irrespective of the administration form.

Diskussion

Though the mean T>MIC for cefuroxime was higher after CI compared to bolus administration in mucosa of the oral cavity and subcutis, both administration forms provide therapeutic tissue concentrations for the coverage of bacterial pathogens after oral cavity cancer surgery.

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