Novelties in perioperative antibiotic prophylaxis

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The aims of an antimicrobial agent for surgical prophylaxis are to prevent surgical site infection (SSI), reduce the duration and cost of health care, prevent SSI-related morbidity and mortality, produce no adverse effects, and have no adverse consequences for the microbial flora of the patient or the hospital.

To achieve these objectives, an antimicrobial agent should be also active against the pathogens most likely to contaminate the surgical site, given in an appropriate dosage and with a timing that ensures adequate serum and tissue concentrations during the period of potential contamination during surgery, to be safe, and administered for the shortest effective period to minimize adverse effects, costs and the development of resistance to antibiotics. The selection of an appropriate antimicrobial agent for a specific patient should take into account the characteristics of the ideal agent, the comparative efficacy of the antimicrobial agent for the procedure, the safety profile, and the patient's conditions (such as: medication allergies, etc.). For most procedures, cefazolin is the drug of choice for prophylaxis because it is the most widely studied antimicrobial agent, with large proven efficacy. It has a desirable duration of action, spectrum of activity against organisms commonly encountered in surgery, reasonable safety, and low cost. In most of the cases, antimicrobial selection is based on safety profile, cost, ease of administration, pharmacokinetic profile and bactericidal activity. The agent chosen should have activity against the most common surgical-site pathogens. In this session, we will review the novelties about antibiotic prophylaxis that have been published in the literature in last years, to help us to choose the best antibiotic prophylaxis in each situation.

Biography

Ana Maria Arnaiz-Garcia finished her postgraduate studies in Medicine in 2002 (University of Cantabria-Spain) and completed her resident period in General Internal Medicine in 2007. Since then, she works as consultant in the Unit of Infectious Diseases in the University Hospital Marqués de Valdecilla (Santander-Spain). Her areas of expertise are the nosocomial infections, overall those concerning the treatment of diabetic foot, cardiovascular and neurosurgical patients. These fields are the main fields of her researches. She has published more than 20 papers in reputed journals and is serving as an editorial board member of repute.

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