Systemic antimicrobial prophylaxis in burn patients: Systematic review

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As nosocomial infections in burn patients are prevalent and dangerous, systemic antibiotic prophylaxis has been considered, beside other interventions. However, this kind of therapy has been questioned due to controversy related to their effectiveness and complications, such as drug toxicity and development of multidrug-resistance. We reviewed systemic antibiotic prophylaxis in burn patients considering therapeutic target in different types of populations or procedures. The searching was conducted in electronic databases during the period 1966-2016. The quality of evidence and strength of recommendation of these guidelines are based on the GRADE system. Nineteen trials met the selection criteria. Early post-burn period prophylaxis was assessed in non severe burn patients (6 trials), and in severe burn patients (7 trials). Antimicrobial prophylaxis showed no effectiveness for toxic shock syndrome or burn wound infection prevention (Grade 1C) but could be useful in patients with severe burns and mechanical ventilation requirement (Grade 2B). Moreover, perioperative prophylaxis was assessed in six trials. Beside, prophylaxis during resection of devitalized tissue would not have indications in most burn patients (Grade 2B), but there is not enough evidence to make a recommendation on extensive burns. Finally, it could be used for the prevention of split-thickness skin graft infections in selected procedures (Grade 2B). We concluded that available evidence does not support the role of systemic antibiotic prophylaxis in the management of the majority of burn patients. Nevertheless, it could be useful in patients with severe burns with requirement for mechanical ventilation and in selected split-thickness skin grafting.

Biography

Ramos Guillermo Enrique has completed his MD in 1989 from Buenos Aires University. He is specialist in Internal Medicine, Intensive Care and Burn Care Medicine. He is ICU staff of Argerich Hospital and ICU Chief of Dupuytren Clinic. He was Organizing Committee President of the Argentine Burn Association Meeting in 2013. He is Professor and Professional Member of Argentine Intensive Care Medicine Society and Argentine Burn Association.

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