INTRA-ABDOMINAL INFECTIONS IN DIGESTIVE SURGERY WARDS: IS EMPIRIC ANTIBIOTIC TREATMENT IN ACCORDANCE WITH LOCAL MICROBIOLOGICAL ECOLOGY?

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Objectives
To analyze antibiotics consumption in digestive surgery wards with pathogen microorganism found in the intra-abdominal fluid (IAF) and to propose a new empiric antibiotic treatment of intra-abdominal infections (IAI) according to recommendations.

Material and methods
Bacteriological and mycological analyses have been performed on all the IAF samples of patients hospitalized in digestive surgery wards in 2014. Antibiotic consumption was analyzed between 2013 and June 2015. Results have been expressed in daily defined dose (70 kg adult usual daily drug dosage in its principal indication) for 1000 hospitalization days (DDD/1000HD).

Bacteriological Results

77 IAF were analyzed
  • 16% of Enterobacteria were resistant to 3GC
  • 11 Enterobacteria were resistant to Nalidixic acid
  • 18% of Enterococcus were resistant to Ampicilline
  • 100% of Staphylococcus aureus were multidrug-susceptible
  • 100% of Pseudomonas aeruginosa were multidrug-susceptible

Results of AntibioticSusceptibility

Between 2013 and 2015, Cefalosporins and Metronidazole prescriptions were stable. Carbapenem consumptions increased by 42% and Fluoroquinolones prescriptions decreased by 59%, Antifungal prescription decreased by 33%. Echinocandin use decreased between 2014 and 2015 by 39%. Amikacin use decrease by 20% between 2013 and 2015.

Conclusion
Empiric antibiotic treatment of community-acquired IAI without serious symptoms was ceftriaxone with metronidazole. It complied with recommendation thanks to the small proportion of resistant E.coli to 3GC found in the IAF.
The increase in the prescriptions of Carbapenems concerned particularly Meropenem that is recommended in nosocomial IAI with risk-factors for multidrug-resistant bacteria. To preserve this class of antibiotics, it is important to evaluate the treatment at its initiation and to reassess it when bacteria are identified.

Since an infectious multidisciplinary meeting has been set up in 2014, antifungal prescription is restricted to patients with serious symptoms. This also helps to reduce Amikacin consumption and reserve it to nosocomial IAI or severe community-acquired IAI.
This study highlights the imperative need to use a prophylactic antibiotic treatment according to local ecology and guidelines.