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Outcomes in urinary sepsis

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Introduction Analysis of mortality-related factors in urinary sepsis patients.
Methods A retrospective descriptive study of urologic sepsis patients in the ICU from 2008 to 2010. Clinical, epidemiological and outcome variables were analysed. Quantitative variables are expressed as either mean and standard deviation or as median and interquartile range for asymmetric variables. Qualitative variables are expressed as percentages and absolute values. Mann–Whitney's U test and Fisher's exact test were applied (α error was 5% in both cases), as well as binary logistic regression for multivariate analysis.
Results There was a total number of 44 patients (aged 59.39 ± 17.71; 63.8% females). APACHE II score upon admission was 18 ± 6. Out of these patients, 27.3% showed no underlying disorder and 18.2% (no = 8) showed chronic renal failure; 25% were immunodepressed patients; 31% underwent urinary instrumentation in the previous 15 days, yet only three of them had undergone permanent urine catheterization. Observed mortality was 25%, while sepsis-related mortality was 22.7%. The patients who died were, on average, older that those who survived (67.9 ±7 10.2 vs. 56.8 ± 18.7; $P = 0.02$). Besides, the former also reported greater delay in turning to the hospital after symptom onset (13.4 ± 6.6 vs. 6.2 ± 4.7 days; $P = 0.0001$). Immunodepressed patients presented higher mortality rate: OR 8.7 (95% CI 1.7 to 42.3), as well as those who underwent inappropriate initial antibiotic treatment: OR 10.8 (95% CI 2.1 to 54.7). No relation was observed between germ typology or resistance to β-lactam antibiotics and mortality. After adjustment of mortality due to APACHE II score upon admission, delay in the onset of appropriate antibiotic treatment was an independent predictor of mortality in our patients: OR 1.2, 95% CI (1.02 to 1.42).
Conclusion Urinary sepsis mortality is associated with late-onset and/or inappropriate antibiotic use, as well as with immunodepression and advanced age.
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Nosocomial pneumonia in the postoperative period after heart transplantation

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Introduction Infections are a major complication during the postoperative period after heart transplantation (HT). In our hospital, nosocomial pneumonia is the most frequent infection in this period. The objective of this study is to determine the epidemiological and microbiological characteristics of this disease in our centre.
Methods A descriptive retrospective study of all medical records of HT performed in a single institution from 1991 to 2009 followed until June 2010. Clinical and microbiological variables were considered. Centre for Diseases Control (CDC) criteria were used to define nosocomial infections. Invasive aspergillosis was considered if there were criteria for probable aspergillosis according to IDSA criteria.
Results In 594 HTs there were 97 infectious episodes in 75 patients (12.6%). Eighty-five patients (14.3%) died during hospitalization. Infection is the second cause of mortality during the postoperative period (17.9% of dead patients). The most common locations of infections were pneumonia ($n = 31$, 31.9% of infection episodes), bloodstream ($n = 24$, 24.7%), urinary tract ($n = 14$, 14.4%), surgical site ($n = 13$, 13.4%) and intraabdominal infections ($n = 13$, 13.4%). Patients with pneumonia were treated according to knowledge in a specific moment, thus different antibiotics were used. The duration of antibiotic therapy was 20 ± 15.5 days. In nine episodes of pneumonia according to the CDC no germ was isolated in the cultures. Six of the episodes were polymicrobial infections. The most frequent microbes isolated were *E. coli* ($n = 7$, 22.5% of pneumonia cases), *A. fumigatus* ($n = 7$, 22.5%), *S. aureus* ($n = 3$, 9.68%), *P. aeruginosa* ($n = 3$, 9.68%), *P. mirabilis*, *K. pneumoniae*, *E. cloacae*, *E. faecalis*, *C. glabrata*, and *S. marcescens* (one case each, 3.22%). Pneumonia was suspected but not confirmed in 75 patients. Despite this, antibiotic treatment was maintained for a media of 17.35 ± 7.01 days: 56 wide-spectrum treatments and 18 targeted therapy after knowing the antibiogram. The length of ICU stay was 38.4 ± 70.8 (3 to 264) days, of hospital stay was 66.2 ± 80.5 (3 to 304) days and of mechanical ventilation was 27.3 ± 50.2 (3 to 264) days. The mortality of patients with pneumonia was 32.3%.
Conclusion Nosocomial pneumonia is the most frequent infection in our series. Despite when infection was not confirmed, antibiotic therapy was maintained in suspect cases. We found a high incidence of aspergillosis. Limitations because of wide duration of this study should be considered.

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Abdominal infection plays a role in the incidence of ventilator-associated pneumonia

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Introduction Despite many therapeutic interventions, ventilator-acquired pneumonias (VAP) are frequent in the ICU and are associated with major morbidity and mortality. Sepsis causes a time-dependent modification of the inflammatory response. This reprogramming could promote the occurrence of a secondary infection and worsen the prognosis. In animals, peritonitis is associated with an alteration of pulmonary immunity and an increasing mortality from secondary pneumonia.
Methods To investigate, in humans, the potential involvement of previous intra-abdominal infection (IIA) in preventing or promoting VAP, we realized a prospective observational study using data from a multicenter database (OUTCOMEREA), including all patients admitted

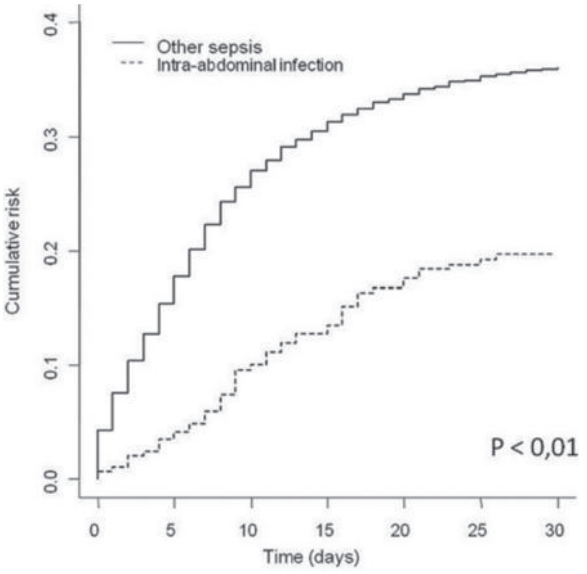

Figure 1 (abstract P46). Cumulative incidence of VAP.