C10. **BLOODSTREAM INFECTIONS IN PATIENTS WITH MALIGNANT DISEASES**

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We studied the resistance phenotypes of the bacteria isolated from patients having positive BSIs, during a three years period (325 strains). The study group: 219 patients had malignant diseases and 106 patients (the control group) had other conditions. We determined the minimal inhibitory concentrations (MICs) with the Vitek 2 compact system and reported them as percent susceptibility to the main /class representative antibiotics used to treat/ prevent BSIs. The resistance mechanisms detected with the same system were confirmed by molecular biology. The pulse field electrophoresis (PFGE) determined the phylogroups of the Gram negative bacilli.

Results: BSIs OR= 1,24, (CI 95% 0,65-1,91), z= 1,64, P=0,1). Gram-negative bacilli n=181, 55,86%; *Enterobacteriaceae* n=124, 48,33%; *P. aeruginosa* n=35, 10,80%. The Gram-positive cocci n=131, 40,43%. The staphylococci n=97, 29,94%, *S. aureus* (n=54, 16,05%), coagulase negative spp (CNS) (n=44, 13,89%). The streptococci: enterococci (n=18, 5,56%), from polimicrobial samples. The fungal BSIs n=6, 1,8%. In the study group the Gram negative bacilli were two to eight times more frequent; *S. aureus* was the dominant pathogen, in both groups; *E. faecium* was predominant in the study group (n=5, 71,4%).

The cumulative susceptibility to 3rd generation cephalosporins (CG III), malignant diseases: *E. coli* n=56, 58,93%; *K. pneumoniae* n=16, 44,44%, *P. aeruginosa* n=35, ceftazidim = 16,67%. ESBL production:: *E. coli* n=20, 35,71%, *K. pneumoniae*: n=7, 43,75%. The carbapenems had the highest susceptibility values. *S. aureus* was methicillin-resistant 74,19% .

Molecular determinations: 65 strains. Phylogroups of *E. coli*: group A, intestinal (n=20, 48,65%), group B2 extraintestinal (n=5, 13,51%). ESBLs belong to the CTX-M group, 50% isolated from hematologic malignancies (n=31). CTX-M group 1 (n=16, 43,24%), (CTX-M-15), mostly in hematologic malignancies. Resistance to fluoroquinolones 3rd generation is the product of the mutant gene aac(6')-Ib la *E. coli :* n=11, 29,73%.

Conclusions: The main pathogens in BSIs in patients having malignant diseases are the Gram negative bacilli. They are MDR (mostly by ESBL of CTX-M 15 type), susceptible only to carbapems (the Enterobacteriaceae) and to colistin P. aeruginosa, as a result of frequent antibiotic treatments. The Enterobacteriaceae belong to the phylogroups A and B1. The BSIS in patients with malignant diseases are a result of the digestive mucosites.