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Abstract (poster session)

**Catheter-related fungaemia caused by *Candida albicans*: are genotypes from the catheter tip and blood the same?**

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**Objectives:** *Candida albicans* is a major cause of catheter-related fungaemia (CRF). The definition of CRF requires the isolation and identification of the same fungal species from both the catheter tip and blood cultures. However, strains are rarely genotyped to prove the presence of identical genotypes in both types of sample. The aim of this study was to investigate the presence of identical *C. albicans* genotypes in blood and tip samples from patients with CRF. **Methods:** We retrospectively studied 22 patients admitted to hospital (January 2008 to December 2010) with *C. albicans* isolated simultaneously from blood and catheter tip cultures (48 isolates: 22 from blood cultures and 26 from catheter tip cultures [an additional tip culture with isolation of *C. albicans* was studied in 4 patients]). In 17 cases, the tip was received in the microbiology laboratory a mean of 2 days (range, 0-5 days) after receipt of the blood sample. Isolates were genotyped using a panel of 6 microsatellite markers (Sampaio JCM 2003, Sampaio JCM 2005, Botterel JCM 2001). Matches between catheter and blood genotypes were defined when they both showed identical alleles for all 6 markers. **Results:** We found matches between genotypes in both samples in 20 of the 22 (91%) patients. Most patients (19/20) had only 1 genotype, but 1 patient had 2 different genotypes found simultaneously in both the tip culture and the blood culture. Only 2 of 20 patients had different genotypes both samples. In one, the catheter tip genotype differed in 2 markers from the blood genotype (the catheter was received in the laboratory 5 days after the blood culture); in the other patient, the catheter tip genotype differed from the blood genotype in 5 markers. In the case of the 4 patients in whom a second catheter tip was analyzed, we again found matches between the catheter tip and blood genotypes. **Conclusions:** The use of a microsatellite panel with high discriminatory power enabled us to show—albeit in a low proportion of cases of CRF—that the *C. albicans* genotypes colonizing catheter tips are different from those causing candidaemia. Future prospective studies including several colonies from both tip cultures and blood cultures are warranted. Jesús Guinea (CP09/00055) and Pilar Escribano (CD09/00230) are supported by a contract from FIS.