

**P2180 Decreased accuracy of *Candida* detection in blood of patients with intra-abdominal candidiasis after receiving blood transfusion**

Jesus Fortun Abete\*<sup>1</sup>, María José Buitrago<sup>2</sup>, Elia García G. De La Pedrosa<sup>1</sup>, Maria Elena Alvarez<sup>1</sup>, Pilar Martín-Dávila<sup>1</sup>, Francesca Gioia<sup>1</sup>, Vicente Pintado<sup>1</sup>, Gemma Moreno<sup>1</sup>, Manuel Cuenca-Estrella<sup>2</sup>, Santiago Moreno Guillen<sup>1</sup>

<sup>1</sup> Hospital Ramón YCajal, Madrid, Spain, <sup>2</sup> Centro Nacional De Microbiología, Majadahonda, Spain

**Background:** Multiplex quantitative real-time PCR (MRT-PCR) in blood can improve the detection of intra-abdominal candidiasis (IAC). We prospectively studied 39 surgical patients receiving >72 hours of antibiotic therapy (no antifungal) who were re-operated by suspected peritonitis.

**Materials/methods:** Blood cultures, MRT-PCR and  $\beta$ -d-glucan (BDG) in serum were performed in all patients. Sera (frozen at -80°C until processed) and blood cultures were tested blind. IAC was defined if *Candida* was detected by direct microscopy examination or growth in culture from purulent specimens obtained during surgery, percutaneous aspiration or from drainage placed less than 24h. For MRT-PCR, the probes targeted the ITS1 or ITS2 regions of ribosomal DNA; Beacon Designer 5.0 software (Premier Biosoft, Palo Alto, CA, USA) was used.

**Results:** Empirical antifungal therapy was started at day +1 in 82% of pts. Candidemia was confirmed only in 3 pts (9%) and IAC criteria were present in 17 pts (43.6%). In 30 pts blood transfusion was required previous to surgery and in 25 of these patients MRT-PCR was repeated in a pre-transfusional plasma.

The following table shows the performance of MRT-PCR and BDG in global cohort (GC) and MRT-PCR in pre-transfusional cohorts (PC)

	<b>MRT-PCR (n: 38, GC)</b>	<b>BDG &gt;80 pg/ml (n: 37, GC)</b>	<b>BDG &gt;300 pg/ml (n: 37 GC)</b>	<b>MRT-PCR PC (n: 25, PC)</b>
Sensitivity	4/16 (25%)	7/11 (63.6%)	15/16 (93.8%)	10/16 (62.5%)
Specificity	20/22 (90.9%)	12/14 (85.7%)	6/21 (28.6%)	19/21 (90.5%)
PPV	4/6 (66.7%)	7/9 (77.8%)	15/30 (50%)	10/12 (83.3%)
NPV	20/32 (62.5%)	12/16 (75%)	6/7 (85.7%)	19/25 (76%)

**Conclusions:** In this very high-risk population for IAC the frequency of candidemia was low (9%); however a 43.6% of pts fulfilled criteria for IAC. Transfusion and fluid requirements decrease the accuracy of MRT-PCR. This dilutional effect also affects BDG (> 80 pg/ml) but is corrected if a cut-off of >300 pg/ml is used.

