

POSTER PRESENTATION

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# Role of blood cultures during continuous renal replacement therapy in septic patients

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## Introduction

Adequate microbiological diagnosis through blood cultures (BC) is essential to optimize the treatment of septic patients. However, their extraction in critically ill patients with continuous renal replacement therapy (CRRT) is poorly studied and characterized. CRRT can modify clinical signs of bacteremia like fever and therefore the indication of obtaining BC. It is also unknown if the therapy itself can alter the results of BC. The routine of BC extraction every 24 or 48 hours is controversial and could be harmful.

## Objectives

To describe the results of blood cultures obtained during treatment with CRRT in septic patients with acute renal failure.

## Methods

Observational retrospective study of a cohort of septic patients admitted to a critical care unit with acute renal failure who required CRRT. BC were extracted routinely or by medical criteria. The study period ranged from May until September 2011.

The variables collected were: positivity rate, contamination rate, microbiological agent most frequently isolated and temporary positivity ratio (more or less than 7 days).

We considered the recommendations of the Spanish Society of Infectious Disease and Clinical Microbiology to define the contamination or positive BC.

## Results

33 patients were included (57,6% males). Median of age was 66 years (IQR: 60-77). The diagnosis were: 23 septic shock (70%), 8 severe sepsis (25%) and 2 moderate

sepsis (5%). The average score of APACHE II was 20,5. The mortality associated was 40% (13 patients). 148 patients undergoing CRRT cycles were collected. 104 BC were obtained from 66 of these CRRT cycles. Microbiological results were: negative in 78 BC (75%); 18 positive BC contamination (17,3%, coagulase negative *Staphylococcus* in all cases); 8 true positive BC (7,7%, corresponding to 5 patients).

For these 5 patients, BC were collected 7 days after admission. The microbiological agents obtained in true positive BC were: *Acinetobacter Baumannii* and *Staphylococcus epidermidis* both in 3 BC each one, and *Pseudomonas Aeruginosa* and *Serratia marcescens* in 1 BC each one.

## Conclusions

Rentability of BC in this cohort of critically ill patients with CRRT is low, and associated with more than seven days after admission. There was a high rate of contamination.

CRRT can alter BC results and modify their rentability. It is necessary to clarify the role of routine BC in patients with CRRT in the absence of signs of infection.

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