Impact of the lack of continued care in the microbiology laboratory in patients with bacteraemia

Mikel Urrutikoetxea Gutierrez, Maria Del Rosario Almela, Eva Lozano, Matxalen Vidal-García, Ruth Figueroa, José Luis Díaz De Tuesta. Basurto University Hospital, Bilbao (Basque Country)

Background: Currently, the Microbiology service of the Basurto University Hospital (BUH) has an operating schedule from Monday to Friday from 8:00 a.m. to 3:00 p.m. In addition, the service has presence guards from 3:00 pm to 10:00 pm on weekdays and from 8:00 a.m. to 3:00 p.m on Saturdays.

Taking into account the current evolution of the specialty and the appearance of new and fast diagnostic techniques, continued attention in microbiology may be necessary. For analyzing this our objective was to evaluate the impact of the absence of continuous care in the microbiology laboratory, by studying the bacteraemia cohort of the hospital.

Materials/methods: The clinical data of patients with bacteremia from BUH during 2017 were collected. In addition to the clinical data, the date and time of introduction of the blood culture in the BactecFX (Becton Dickinson), as well as the date and time of positivity of each bottle and the time of its processing.

Results: A total of 730 patients (398 men and 332 women) with an average age of 70.6 years were analyzed. 95 deaths were counted (13% mortality).

In the subgroup whose blood culture was positive on Sunday, there were 13 deaths from a total of 88 patients (14.7%) whereas in the rest there were 82 deaths from 641 patients (12.7%).

If we analyze the mortality attributable to bacteremia, the difference is even greater from 9% to 5.7%.

Conclusions: The introduction of continued care in our service on Saturdays, Sundays and holidays can be an effective measure to reduce mortality attributable to bacteremia. The increase in 3 days of average stay in patients whose blood culture is positive during the hours without attention in the laboratory may be related to the delay in the processing of positive blood cultures.