Poster 1658, 2004 ECCMID

Comparison of the VersaTREK to the ESP Culture System II for blood cultures

V. LaBombardi, D. Fett, A. Kamel, N. Sullivan
New York, Sun Prairie, USA

Objective: A series of studies were conducted comparing the next generation blood culture instrument, the VersaTREK (VT) to the ESP Culture System II (ESP). These studies were conducted in the laboratories of Trek Diagnostic Systems (TS), Sun Prairie WI, USA and St. Vincent's Hospital (SVH) New York, New York, USA.

Methods: VT 80 ml blood culture bottles and ESP 80 ml blood culture bottles were seeded with suspensions of a variety of microorganisms. These bottles were incubated in their respective instruments and compared as to the time required to detect a positive culture and the quality of the curves generated. A clinical trial was conducted using specimens routinely collected for blood culture from inpatients at SVH.

Results: The initial seeded studies at TS included 45 different Gram Negative and Gram Positive bacteria, and yeast. Comparing the ESP 80A bottle to the Redox 1 (VT) bottle, isolates in the VT had a shorter time to detection (TTD) than in the ESP with 44/45 of the isolates by an average time of 1.08 h. The resulting graph profiles in the VT were equal to, or better than, those generated in the ESP. Comparisons of the ESP anaerobic bottle to the VT Redox 2 yielded similar results. Seeded studies were conducted at SVH with 69 isolates representing 13 different species of bacteria and yeast. Comparing the two systems, 11/13 species were seen to have a faster TTD in the VT than in the ESP. Preliminary data on over 300 samples from an ongoing clinical trial comparing the recovery and TTD from patient specimens has shown the VT to be at least comparable to the ESP for these two criteria.

Conclusions: Seeded and clinical data has demonstrated that the VT is at least comparable to the ESP for blood cultures and has validated the VT for use in the clinical microbiology laboratory.