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Findings in Vascular Catheter Cultures at the Laboratory of Microbiology of General Hospital during One Year

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Abstract : Abstract— Purpose: The Intensive Care Unit (ICU) environment is conducive to the growth of microorganisms. A variety of microorganisms gain access to the intravascular area and are transported throughout the circulatory system. Therefore, examination of the catheters used in ICU patients is of paramount importance. Material and Method: The culture medium is a catheter tip, which is enriched with Tryptic soy broth (TSB). After one day of incubation, the broth is passaged in the following selective media: Blood, Mac conkey No. 2, chocolate, Mueller Hinton, Chapman, and Saboureaud agar. The above selective media is incubated for 2 days. After this period, if any number of microbial colonies is detected, gram staining is performed and then the microorganisms are identified by biochemical techniques in the automated Microscan (Siemens) system followed by a sensitivity test in the same system using the minimum inhibitory concentration (MIC) technique. The sensitivity test is verified by a Kirby Bauer test. Results: In 2017, the Microbiology Laboratory received 84 catheters from the ICU. 42 were found positive. Of these, S. epidermidis was identified at 8, A. baumannii in 10, K. pneumoniae in 6, P. aeruginosa in 6, P. mirabilis in 3, S. simulans in 1, S. haemolyticus in 4, S. aureus in 3 and S. hominis in 1. Conclusions: The results show that the placement and maintenance of the catheters in ICU patients are relatively successful, despite the unfavorable environment of the unit.

Keywords : culture, intensive care unit, microorganisms, vascular catheters
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