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Of Patient Profiles From Central Venous Catheter Tip Culture

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Objective: Use of Central Venous Catheter (CVC) is a common medical treatment in most institutes. It became a routine for most institutes to monitor the tip culture as an indicator for hospital infection. As CVC comes in different sizes and types, this study aimed to analyze the patient profiles from tip cultures so as to provide information for clinicians before they decide the type of CVC to be inserted.

Methods: We collected 3,486 cases of CVC inserted in our hospital during the period of January to April, 2005. Patient profiles including age, sex, diagnosis, days of hospitalization, use of antibiotics, use of Total Parenteral Nutrition (TPN), type of CVC inserted and results of CVC tip cultures were obtained from the hospital computer center. CVC tip cultures were divided into infected or non-infected groups (group A and B) as revealed by their bacterial culture. Patient profiles were compared between the infected and non-infected groups.

Results: No significant differences in culture rates were found with respect to patient's age and sex. Tip culture rates increases with days of hospitalization (1 - 29%) (p < 0.001). Patients receiving antibiotic treatments had a higher incidence of positive tip culture (1 vs. 8%) (p < 0.001). Tip culture rates increase in patients receiving TPN treatment (7 vs 23%) (p < 0.001). There were no significant differences in tip culture rate with respect to the type of CVC inserted. (Antibiotic coated or not).

Conclusions: Our results showed that CVC infection rate had no correlation between patients' age, sex or types of CVC inserted. However, infection rate increases with TPN treatment, days of hospitalization and patients who were already receiving antibiotic treatments.

Key word: patient profile; central venous catheter; tip culture