Evaluation of central venous catheter–related infections in hemodialysis patients referred to Imam Khomeini hospital for dialysis during 1394

ABSTRACT

Background: Use of a central venous catheter for hemodialysis often predispose patients to infection and thus increased mortality and morbidity in these patients, so, we decided to do a study for evaluation of central venous catheter infection in hemodialysis patients.

Methods: This study was designed to evaluate the catheter-related infections in hemodialysis patients. All hemodialysis patients with temporary and constant catheters inserted for more than one month were included in this study. Also we aimed to identify the microorganisms isolated from catheter of patients. A questionnaire that included demographic and medical data was completed for each case. Also laboratory data was, including catheter and blood cultures, were collected for each case. Marginal and insid blood cultures were sent immediately for suspected catheter related infection. Data analysis was performed using the SPSS version 19.0.

Results: 60 hemodialysis patients with temporary and constant catheters inserted for more than one month were included in this study, of which, 38 patients were female (63.33 %) and 22 males (36.66 %). The most common comorbidity of them was diabetes mellitus (53.33 %). Staphylococcus epidermidis and aureus was a common pathogenic organism in catheter-related infection. This study revealed that most negative culture of catheter had been inserted with a senior. The most common clinical manifestation of catheter-related infection was tenderness of the catheter site.
Conclusion: A month after catheter insertion, colonization of microorganisms increases, this can manifested without systemic signs but can predispose patients to sever infection in future. In examination of these patients tenderness is the most important finding for the early detection of subclinical infection also staphylococcus epidermidis and areus colonization is dominant microorganisms in these patients. This finding can be used to early diagnosis and initiation of empirical treatment in these patients.

Key words: central venous catheter, hemodialysis, catheter infection