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Hidden Dangers in blood-related infections: Connectors

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The use of connectors attached to the catheter tip for various purposes is increasing at clinics in hospitals. The aim of this study is to determine the rate of bacterial colonization in three way stopcocks and needle-free vein valves placed in central venous, port, and peripheral catheters. The research was conducted in surgical, reanimation intensive care, and out-patient chemotherapy units. Patients who were recently admitted to hospital, older than 18 years, treated with peripheral, central, and port catheters, connected to IV infusion for at least 48 hours, and who exhibited no evidence of infection were randomly assigned to the study. Prior to the onset of the study, patients were given clinical examinations in accordance with any findings of infection, and the infective criterion of acute phase response was evaluated. In the study, two different types of connectors were inserted under aseptic conditions for various periods (between 48-72 hours) including a three way stopcock to the central, port and peripheral catheters, and the other needle-free vein valve. A total of 180 patients, 30 of whom were from general surgery, oncology and intensive care units were included in the study. Bacterial colonization was found in 46.7% of the central venous catheters, in 26.7% of the three way stopcocks in peripheral venous catheters, and in 6.7% of the three way stopcocks in port catheters. While no significant difference was found between bacterial colonization with the use of triple connectors and needle-free vein valves in central and port catheters ($p = 0.05$), colonization in the patients with three way stopcocks in peripheral catheters was found to be higher than in needle-free vein valves ($p = 0.011$). In our study, depending on the catheter type, no difference between the ureters in the central and port catheters may have been due to the implementation of infection prevention strategies. Less colonization in the needle-free vein valve attached to the peripheral catheters shows that prior to each administration, the cleaning of the valve inlet could affect colonization development.

Biography

Tuba Sengul completed her PhD in 2016 from Istanbul University Florence Nightingale Nursing Faculty. She works at Koc University as an instructor. She is interested in surgical nursing and fundamental nursing area.

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