Cleaning and Disinfecting Blood Pressure Cuffs (12/06)


In this study the authors investigated the potential role of blood pressure (BP) cuffs in the spread of bacterial infections in hospitals. A comprehensive, prospective study quantitatively and qualitatively evaluated the bacterial contamination on BP cuffs of 203 sphygmomanometers used in 18 hospital units for three months in a university hospital. A level of contamination reaching 100 or more colony-forming units per 25 cm² was observed on 92 (45%) of inner sides and 46 (23%) of outer sides of 203 cuffs. The highest rates of contamination occurred on the inner side of BP cuffs kept in intensive care units (ICUs) (20 [83%] of 24) or on nurses’ trolleys (27 [77%] of 35). None of the 18 BP cuffs presumed to be clean (i.e., those that had not been used since the last decontamination procedure) had a high level of contamination. Potentially pathogenic microorganisms were isolated from 27 (13%) of the 203 BP cuffs: 20 of these microorganisms were Staphylococcus aureus, including 9 methicillin-resistant strains. The highest rates of contamination with potentially pathogenic microorganisms were observed on cuffs used in ICUs and those kept on nurses’ trolleys. For four patients with a personal sphygmomanometer, a genetic link was found between the strains isolated from the BP cuffs and the strains isolated from the patients. The results of this survey highlight the importance of recognizing BP cuffs as potential vectors of pathogenic bacteria among patients and as a source of reinfection when dedicated to a single patient, emphasizing the need for validated procedures for their use and maintenance.

DECS Comment: Blood pressure cuffs are included in the noncritical category of medical devices. Noncritical describes the category of medical items or surfaces that carry the least risk of disease transmission because they touch only unbroken or intact skin. Despite this, it is still required to use disposable barrier protection or to clean, or if visibly soiled, clean and disinfect noncritical items after each patient visit. This study describes the potential health risks associated with the use of blood pressure cuffs. Also, it reminds us of the importance of implementing standard operating procedures for cleaning and disinfecting blood pressure cuffs.