

Abstract Type : Oral

Abstract Submission No. : OR-1044

Vascular Catheter-Site Care Using Different Skin Antiseptics for Prevention of Catheter-Related Blood Stream Infection: A Meta-Analysis

Martin Ogbac, Euodia Guinmapang, Frederick Ogbac
Department of Internal Medicine, Ospital ng Makati, Philippines

Objectives: Infections are common complications among end-stage kidney disease (ESRD) patients undergoing hemodialysis (HD). It is the second most common cause of death and a major cause of hospital admission among ESRD patients. Among the different infections that ESRD patients are at risk, catheter-related blood stream infection (CRBSI) plays a significant role. Several guidelines have proposed measures to prevent CRBSI including different topical solutions to disinfect the access site. The 2 most commonly used solutions are chlorhexidine and povidone-iodine. This study aims to identify which among the 2 most commonly used disinfectants is more effective in preventive CRBSI.

Methods: Several published randomized controlled trials about the different topical solutions in preventing catheter-related bloodstream infection were identified using MEDLINE, COCHRANE, and EMBASE. The studies included were published from 1990 to 2018. The primary outcome was the incidence of catheter colonization and CRBSI.

Results: 8 studies were included in this analysis. A total of 4902 central vascular insertions were identified. Patients, who were enrolled in the chlorhexidine group had a catheter bacterial colonization incidence of 5.17% while those in the povidone-iodine group had 7.9%. Patients in the chlorhexidine group had a CRBSI incidence of 2.9% while those in the povidone-iodine group had 4.6%.

Conclusions: The use of chlorhexidine is more superior in preventing catheter colonization of central vascular catheters compared to povidone-iodine. It is not clear, however, whether which intervention is more effective in preventing catheter-related bloodstream infection as both groups demonstrated almost similar incidence of CRBSI.

Figure 1: Catheter colonization of central vascular catheters comparing Chlorhexidine and Povidone-Iodine with subgroup

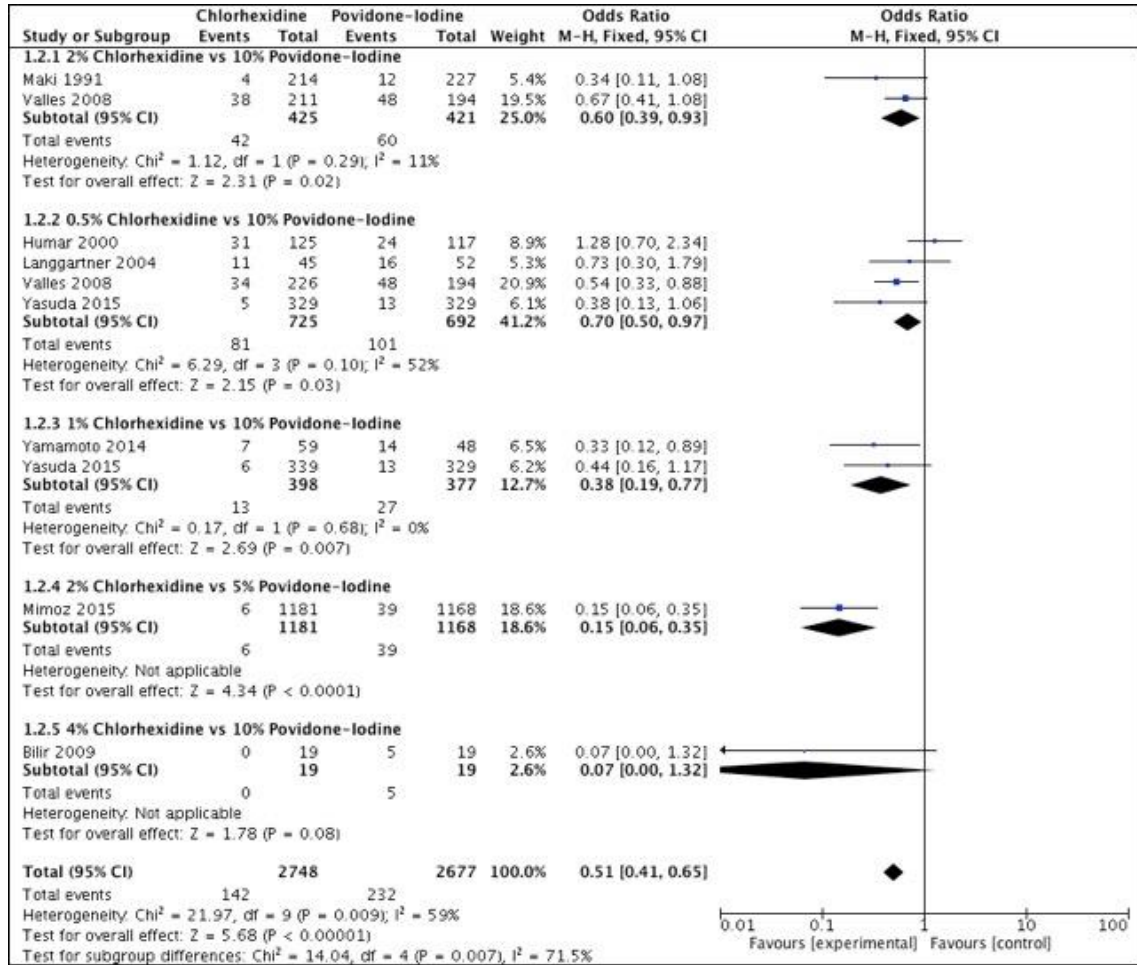


Figure 2: Catheter-related Bloodstream Infection in studies comparing chlorhexidine and povidone-iodine

