

عنوان مقاله:

The effect of ۷.۵% Povidone-Iodine versus ۰.۲% Chlorhexidine on Microbial Count of Surgical Site in Abdominal Surgery: A Randomized Clinical Trial

محل انتشار:

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خلاصه مقاله:

Background: One of the most common preventive methods of Surgical Site Infection (SSI) is preoperative skin preparation. Selecting the skin antiseptic before surgery is an important step that can reduce SSI risk. **Aim:** The present study was performed with aim to compare the effect of ۷.۵% povidone-iodine (PVP-I) and ۷۰% alcohol versus ۰.۲% chlorhexidine (CHG) and ۷۰% alcohol on the microbial count of the surgical site in the abdominal surgery. **Method:** This double-blind randomized clinical trial study was conducted between March ۲۰۱۷ and July ۲۰۱۸ at the educational-therapeutic centers of Iran University of Medical Sciences. The patients aged ≥ 18 years who underwent elective abdominal surgery were randomly assigned into two groups to have their skin cleaned before surgery with CHG-alcohol or PVP-I-alcohol. Also, before skin prep, after the primary prep and after the secondary prep, microbial cultures were taken. Data analysis was performed using SPSS (version ۱۶) and Chi-square, Fisher's exact, Kolmogorov-Smirnov, Wilcoxon and U-Mann-Whitney tests. $P < 0.05$ was considered statistically significant. **Results:** The microbial counts mean differences before and after skin preparation with PVP-I-alcohol were significant ($P < 0.05$). Also, the microbial counts mean differences before and after skin preparation with CHG-alcohol were significant ($P < 0.05$). Overall, both antiseptic groups significantly reduced microbial counts. Although the skin preparation with CHG-alcohol was better than the PVP-I-alcohol solution, the difference between the two groups was not significant ($P > 0.05$). **Implications for Practice:** This study did not demonstrate an overall superiority of ۲% CHG over ۷.۵% PVP-I skin preparation solution or vice versa. Both groups can be used to prepare patients' skin before abdominal surgery due to the affordability conditions and availability.

کلمات کلیدی:

Anti-infective agents, Chlorhexidine, Colony Count, Microbial, Povidone-iodine, Surgical site infection

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