

**Tags** Preventive washing, MDRO, intensive care

**Title** **EFFECT of daily antiseptic bathing with octenidine on ICU-acquired bacteremia and ICU-acquired multidrug-resistant organisms: a multicenter, cluster-randomized, double-blind, placebo-controlled, cross-over study**

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**Aim of the study** The aim of the study was to evaluate the effectiveness of daily antiseptic bathing with octenidine in preventing intensive care unit (ICU)-acquired primary bacteremia and ICU-acquired multidrug-resistant organisms (MDROs). The risk of primary bacteremia or MDRO acquisition is particularly high in ICU patients and can affect morbidity, mortality, length of hospital stay and cost of care. Prevention of these healthcare-associated complications is therefore of great interest.

**Methods** The EFFECT study – a multicentre, placebo-controlled, cluster-randomised, double-blind, cross-over study – evaluated the preventive effect of octenidine-containing washcloths on primary bacteremia and ICU-acquired MDRO infections. In total, a dataset of 104,039 ICU episodes from 93,438 patients and 712,784 microbiological test results was generated. ICU stays longer than 2 days were filtered. The 44 ICUs in 23 hospitals in Germany were compared to themselves over a 30-month period (3-month wash-out phase followed by 12-month intervention and observation phase for each type of washcloth). Randomization concerned the order in which octenidine- and placebo washcloths were used.

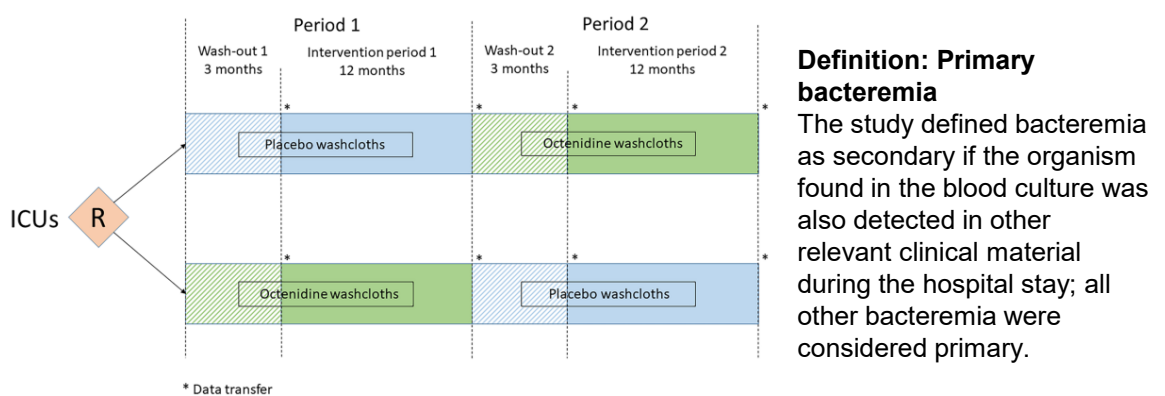


Figure: Flowchart of the EFFECT crossover study design

**Results** 1508 cases of ICU-acquired primary bacteremia and 1871 cases of ICU-acquired MDRO were detected. A statistically highly significant result in favour of the octenidine-containing washcloths was found for ICU-acquired primary bacteremia. A **risk reduction of 17%** was demonstrated with a hazard ratio of 0.83 [0.75 ; 0.92],  $p = 0.0003$ . However, there was no statistically significant result in favour of either placebo or octenidine-containing washcloths for the acquisition of MDROs (HR: 0.98 [0.83; 1.15]).

**Conclusion** 17 % risk reduction in primary bacteremia was achieved by using octenidine-containing washcloths compared to placebo. It can therefore be concluded that octenidine is a valuable addition to preventive washing.