

# **Chlorhexidine–alcohol versus povidone iodine for skin preparation before elective cesarean section: a prospective observational study**

## **Summary**

**Introduction:** The ideal antiseptic agent for skin preparation before elective cesarean section (CS) is not yet determined. The aim of the study was to assess the impact of skin preparation by chlorhexidine–alcohol compared with povidone–iodine before elective CS on the rate of surgical site infection (SSI).

**Materials and methods:** This prospective observational study included a total of 1424 pregnant women at term who were candidates for the elective CS and were divided into two equal groups of 712 patients in each, group 1 (chlorhexidine–alcohol group) and group 2 (povidone iodine group). Patients were followed up at 1 week and 1 month postoperative to determine the rate of SSI.

**Results:** The rate of SSI was 3.7% (26 patients) in the chlorhexidine–alcohol group compared with 4.6% (33 patients) in the povidone–iodine group (odds ratio: 0.7798, 95% CI: 0.46–1.3,  $p=0.35$ ), nine patients in the chlorhexidine–alcohol group, and 10 patients in the povidone–iodine group required resuturing (odds ratio: 0.9, 95% CI: 0.36–2.2,  $p=0.82$ ). Four patients (0.56%) in the chlorhexidine–alcohol group and five patients (0.7%) in the povidone–iodine group developed endometritis ( $p=0.74$ ). The rate of readmission because of SSI was 2.7% (19 patients) in the chlorhexidine–alcohol group and 2.9% (21 patients) in the povidone–iodine group ( $p=0.75$ ).

**Conclusions:** Skin preparation with either chlorhexidine–alcohol or povidone–iodine resulted in comparable rates of SSIs. Accordingly, both are suitable antiseptic agents for skin preparation before elective CS