

# HAC 2016 ABSTRACT for Oral Presentations

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**Project title**

Pressurized irrigation versus swabbing method in cleansing wounds healed by secondary intention: A randomized controlled trial with cost-effectiveness analysis

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**Keyword(s)**

wound irrigation  
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**Introduction**

Wound cleansing should create an optimal healing environment by removing excess debris, exudates, foreign and necrotic material which are commonly present in the wounds that heal by secondary intention. At present, there is no research evidence for whether pressurised irrigation has better wound healing outcomes compared with conventional swabbing practice in cleansing wound.

**Objectives**

This study investigated the differences between pressurised irrigation and swabbing method in cleansing wounds that healed by secondary intention in relation to wound healing outcomes and cost-effectiveness.

**Methodology**

The study design was a multicenter, prospective, randomised controlled trial It took place in four General Outpatient Clinics in Hong Kong. Two hundreds and fifty six patients with wounds healing by secondary intention were randomly assigned by having a staff independent of the study opening a serially numbered, opaque and sealed envelope to either pressurized irrigation (n=122) or swabbing (n=134). Staff undertaking study-related assessments was blinded to treatment assignment. Patients' wounds were followed up for 6 weeks or earlier if wounds had healed to determine wound healing, infection, symptoms, satisfaction, and cost effectiveness. The primary outcome was time-to-wound healing. Patients were analysed according to their treatment allocation. This trial is registered with ClinicalTrials.gov, number NCT01885273.

**Result**

Intention-to-treat analysis showed that pressurised irrigation group was associated with a shorter median time-to-wound healing than swabbing group [9.0 days (95% CI: 7.4–13.8) vs. 12.0 (95% CI: 10.2–13.8); p=0.007]. Pressurised irrigation group has significantly more patients experiencing lower grade of pain during wound cleansing (93.4% vs. 84.2%; p=0.02), and significantly higher median satisfaction with either comfort or cleansing method (MD 1 [95% CI 5–6]; p=0.002; MD 1 [95% CI 5–6]; p<0.001) than did swabbing group. Wound infection was reported in 4 (3.3%) patients in pressurised irrigation group and in 7 (5.2%) patients in swabbing group (p=0.44). Cost-effectiveness analysis indicated that pressurised irrigation in comparison with swabbing saved per patient HK\$ 110 (95% CI -33 to 308) and was a cost-effective cleansing

method at no extra direct medical cost with a probability of 90%. Conclusion: This is the first randomised controlled trial to compare the pressurised irrigation and swabbing. Pressurised irrigation is more cost-effective than swabbing in shortening time that wound heals by secondary intention with better patient tolerance. Use of pressurised irrigation for wound cleansing is supported by this trial.