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Comparison of superficial surgical site infection between delayed primary and primary wound closures in ruptured Appendicitis

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Abstract

Background: Delayed primary (DPC) and primary (PC) wound closures have been applied in ruptured appendicitis, but results were controversial. This study aims at comparing the rate of superficial surgical site infection (SSI) in ruptured appendicitis between DPC and PC.

Method: A retrospective cohort of ruptured appendicitis was conducted between October 2006 and November 2009. Demographic, operative findings and postoperative infection data were retrieved. The superficial SSI rates between groups were compared using an exact test. An odds ratio of SSI was then estimated.

Results: One-hundred and twenty eight patients with ruptured appendicitis were eligible and their data were retrieved; 115 (90%) patients had received DPC and 13 (10%) patients had received PC. The SSI rate was much lower in PC patients than in DPC patients, i.e., 7.7% [95% confidence interval (CI): 0.02, 36.0] versus 27.8% (95% CI: 19.9, 37.0), respectively. There was an approximately 72% lower risk of SSI in the PC group than in the DPC group, but this did not reach statistical significance (p=0.18).

Conclusion: Our study suggested that PC does not increase risk of SSI in low SSI risk patients with ruptured appendicitis. DPC should not be routinely done.

Keywords: appendicitis; delayed primary, closure, surgical site infection, wound closure

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