

**IMPLEMENTATION OF SURGICAL SITE INFECTION (SSI) PREVENTION BUNDLE IN REDUCING THE INCIDENCE OF POST-MASTECTOMY SSI AMONG BREAST CANCER PATIENTS IN MALAYSIA.**

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**Abstract**

**Introduction**

Surgical site infection (SSI) is one of the commonest healthcare associated infections in developing nations. The incidence of post-mastectomy SSI vary from 1-30%. This is significantly higher compared to the expected incidence of 2% for clean surgeries. The aim of this study is to implement the SSI prevention bundle and to identify risk factors of SSI among breast cancer patients undergoing mastectomy at University Malaya Medical Centre (UMMC).

**Method**

The study was a prospective cohort study conducted between July 2017 to September 2018. Patients undergoing immediate reconstruction were excluded. The implementation of the bundle used the quality implementation framework. The bundle consists of preoperative, intraoperative & postoperative evidence-based preventive measures adapted from the Global Guidelines for the Prevention of SSI by World Health Organization (WHO). The pre-implementation baseline retrospective SSI rates were obtained from July 2015 to June 2016 and post-implementation SSI rate was collected prospectively between July 2017 to September 2018.

**Results**

The pre-implementation SSI rate was 23.1% (27 out of 117 cases) compared to post-implementation rate of 6.9% (11 out of 159 cases). There was a 70% reduction in the SSI rates. Multivariate logistic regression analysis revealed that patients undergoing surgery without the SSI bundle (OR: 5.28, 95% CI:1.76-15.82, p value=0.003) and obesity (OR: 6.34, 95% CI:1.44-30.00, p value=0.02) were significant risk factors of SSI.

## Conclusion

The implementation of the SSI prevention bundle was effective in reducing the incidence of SSI rate amongst breast cancer patients undergoing mastectomy.

Keywords: Surgical site infection, surgical site infection prevention bundle, mastectomy, breast cancer.

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