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Impact of Post Discharge SSI Surveillance for Breast Surgery

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Introduction

Breast surgery is one of the treatments for breast cancer. Surgical site infections (SSI) are infections developed within 30 days after the operation and SSIs are associated with increased morbidity, mortality and prolonged hospital stays. Early discharge of patients with clean operations can shorten the hospital stay, thus reduce the burden of ward staff and hospital costs. Post-discharge SSI surveillance up to 30 days is an essential feature of the SSI surveillance program but its value has been queried.

Objectives

To determine the post-discharge SSI rate and to identify the impact of post-discharge surveillance to breast surgery

Methodology

All patients underwent breast surgery in the 15 public hospitals under Hospital Authority (HA) during the period from January 2009 till June 2012 were included in the prospective SSI surveillance. SSIs are identified by infection control nurses through direct observation and reviewing patients' records / laboratory reports following the standard protocol up to 30 days after operation. If the patient is discharged, a post-discharge telephone survey on post-operative Day 30 would be conducted in addition to reviewing patients' outpatient clinical record for post-discharge wound condition. Logistic regressions were used to explore the possible risk factors associated with SSI.

Result

Over eight thousand (8219) breast surgeries were performed during the period (breast surgery for men were excluded). Mean age was 53.36 years. SSI were diagnosed in 113 patients making the SSI rate of 1.37% (95% CI: 1.13-1.65). For those developed SSI, 18 (15.9%) were developed during hospitalization and 95

(84.1%) were identified after discharge. The mean days for developing SSI was 12.55 days; while the mean length of hospital stay after operation was 5.93 days.(Fig 1) Post-discharge surveillance was important to identify SSI and to offer better wound care to patients developing SSI. Our findings showed that majority of SSIs for breast surgery were developed after discharge. By multivariate logistic regression, risk factors for developing SSIs included diabetes mellitus (OR: 2.71, $p<0.05$). In this regards, active post-discharge surveillance for breast surgery is important for collecting the surgical wound infection information. As the patients are usually discharged before the complete healing of the wound after breast surgery, patient enpowerment for post-discharge wound care is vital for prevention of SSI especially for those who have risk factors, such as those with diabetes mellitus.