**Abstract**

Surgical site infection (SSI) is the second most common type of nosocomial infection at the National Institute of Medical Sciences and Nutrition Salvador Zubirán. SSIs are associated with increased hospital stay, costs and mortality. Despite continuous reduction in nosocomial infection rates in the last two decades at our Institution, in the 90’s SSIs increased slightly. In the present study we investigate the epidemiology and associated risk factors of SSI at our Institution. We prospectively enrolled 510 patients on postoperative day one. We recorded several risk factors for the development of SSIs. Identification of SSIs proceeded adhering to CDC definitions of SSI. We inspected surgical sites and medical records daily on week days and conducted post discharge surveillance until postoperative day 30. SSI developed in 25.5 % of patients. SSI increased hospital and postoperative stay. Stepwise logistic multivariate regression analysis identified the following risk factors for the development of a SSI: Body Mass Index >= 27 kg/m2, albumin < 3 g/dl, preoperative stay >= 5 days, red blood cell transfusions, the presence of diabetes mellitus and National Nosocomial Infection Surveillance (NNIS) System risk index. The present study provides useful information for reducing SSI rates at our Institution. We propose different strategies to reduce SSI rates at our institution. The administration of albumin during and after surgery should be explored since it potentially reduces SSI risk and increases oncotic pressure and therefore reduces the need for red blood cell transfusions. We also need to investigate a tight glucose control regimen before, during and after surgery also to demonstrate if this approach diminishes surgical site infection rates.

**Keywords:** Surgical Site Infection, Risk Factors, Body Mass Index, Red Blood Cell Transfusions, Preoperative stay, Albumin, Diabetes Mellitus, NNIS