Abstract

Objective Establishing the effectiveness of the National Nosocomial Infection Surveillance System (NNIS) and Study of the Efficacy of Nosocomial Infection Control's (SENIC) prognostic surgical site infection (SSI) indices in Colombian hospitals and assessing the influence of other risk factors. Methods A prospective, multicentre cohort study was conducted in five Colombian hospitals. All patients undergoing surgery requiring hospitalisation or ambulatory surgeries having a greater risk of infection were enrolled. A case was defined as being those subjects who presented the CDC diagnostic criteria of incisional superficial, deep incisional or organ-space SSI. Age, gender, comorbidities, type of surgery, procedures, medical specialty, type of wound, surgical time, antibiotic prophylaxis and patient outcome were used for developing a predictive model of SSI using logistical regression analysis. The indexes' predictive ability was assessed by using the area under the receiver operating curve (ROC). Results 7,022 surgical procedures were evaluated and SSI rate was 2.9%. NNIS and SENIC risk index performance was similar to that for predicting SSI (0.68 cf 0.66 area under ROC, respectively). The new predictive model involved other factors such as age, diabetes mellitus, transfusions and surgical specialty showing 0.74 operating performance. Conclusions Existing SSI predictive models have a moderate ability for predicting SSI but this can be improved with some local factors.

Keywords

Surgical wound infection, Colombia, risk index.