Chirurgia (Bucur). 2015;110(5):457-461

Surgical Site Infection: Re-assessment of the Risk Factors

O. Isik, E. Kaya, H.Z. Dundar, P. Sarkut
Department of Surgery, Uludag University School of Medicine, Turkey

Abstract

Background: Surgical site infection (SSI) is a well-known complication of general surgery. Although overall SSI rate is relatively low, it is the most common nosocomial infection. SSI adversely affects patient outcomes and healthcare costs.

Methods: Patients who underwent general surgical procedures between 2003 and 2009 were included in the study. SSI diagnosed based on the National Nosocomial Infection Surveillance System (NNIS) criteria. Patients were classified into two groups: SSI (+) and SSI (-). Patient demographics, co-morbidities, procedural details, and SSI type and treatment were evaluated. Multivariate analysis was performed to determine independent risk factors of SSI.

Results: In total, 4690 patients were included. Overall SSI rate was 4.09% (192/ 4690). Colorectal surgery was associated with the highest SSI rate (9.43%) followed by pilonidal sinus (8.79%), upper gastrointestinal (GI) (8.09%), hepatobiliary (6.68%), hernia (0.78%), and breast-thyroid (0.3%) surgery. Procedure type (pilonidal sinus, colorectal, hepatobiliary and upper GI surgery), prolonged preoperative hospital stay, higher ASA score, emergency surgery, dirty- infected wound class, experienced surgeon, prolonged operating time, presence of surgical drains, and intraoperative transfusion were determined as independent risk factors of SSI ($p< 0.05$).

Conclusion: Most of the determined risk factors were surgeon and procedure related. Reduced SSI rate and better outcomes can be achieved by controlling modifiable risk factors.

Key words: Surgical site infection, risk factor, general surgery