Background

- To analyze the incidence and risk factors associated with the development of Surgical Site Infection (SSI) in patients undergoing Clean Surgeries.
- The objective of our study is to answer two questions: 1. What is the incidence, the risk of infection of the surgical site in patients undergoing clean surgery? 2. What are the risk factors and protective factors for surgical site infections in clean surgery infections?

Methods

- Retrospective, multicenter study, based on the data from medical records of 45,990 patients from 7 hospitals in Belo Horizonte, between July 2016 and June 2018. Variables of severity score, age, trauma, prosthesis, surgery time, number of professionals in the block, general anesthesia and emergency were evaluated.
- Data were gathered by standardized methods defined by the National Healthcare Safety Network (NHSN)/CDC procedure-associated protocols for routine SSI surveillance.
- 26 preoperative and operative categorical and continuous variables were evaluated by univariate and multivariate analysis (logistic regression).

Results

- 650 SSI from 45,990 surgical patients were diagnosed (risk = 1.4% [C.I. 95% = 1.3% - 1.5%]).
- Among the variables related to SSI, the factors that had the greatest impact (p<0.001) were: length of stay above 4 days, duration of surgery above 2 hours, general anesthesia, patient over 70 years of age, ASA score above 2.
- The only protective factor for infection of the surgical site in infections from clean surgeries was surgery performed through videolaparoscopy.

Conclusion

- The incidence of risk of surgical site infection is 1.4%, with a 95% confidence interval ranging from 1.3% to 1.5%.
- Risk factors for surgical site infection in clean surgery infections are preoperative length of stay above 4 days, duration of surgery above 2 hours, general anesthesia, patient over 70 years of age, ASA score above 2, surgery associated with trauma, surgery classified as emergency, patient undergoing more than one surgical procedure in addition to the main and prosthesis implant.
- The only protective factor for infection of the surgical site in infections from clean surgeries was surgery performed through videolaparoscopy.