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## Risk of infection in oncological megaprosthesis reconstruction

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### BACKGROUND

Literature reports an incidence of Surgical Site Infections (SSI) in oncological patients undergoing prosthetic replacement, between 8% and 35% after implantation and 43% after revision.

The frequency of SSI has gradually decreased after the introduction of antibiotic prophylaxis, however the appropriateness of perioperative prophylaxis for these patients is still controversial.

The purpose of this retrospective study, conducted at the oncologic orthopedic Unit of G.Pini Institute in Milan, was to evaluate:

- the number of SSI in oncological megaprosthesis reconstruction between 2009 and 2011,
- possible risk factors associated to the onset of SSI,
- the antibiotic prophylaxis applied.

### METHODS

We reviewed medical records of patients who underwent clean megaprosthesis reconstruction and collected hospitalization and follow up data, focusing on possible risk factors implied in the onset of SSI: patient characteristics, duration of surgery, number of persons in the operating room, size of resection, blood losses, antibiotic prophylaxis, etc. We registered every SSI meeting the criteria set by the European protocol HELICS.

### PRELIMINARY RESULTS

86 surgeries were evaluated, 37 women (43%) and 49 men (57%) whose mean age was 48 years and mostly ASA 2 (43%) and 3 (39%). Administration of prophylaxis was usually recorded (95%) and continued postoperatively (96%) for an average of 8 days, often related to the length of postsurgical stay. Mean duration of surgery was 256 minutes with a mean of 7 persons attending the operating room. We recorded 6 SSI on 86 surgeries evaluated (7%): 4 deep and 2 superficial, 4 occurring after one month and 2 after one year from surgery. Statistical analysis will be completed by integrating data from year 2008, whose collection is in progress.

### CONCLUSIONS

The criteria for inclusion or exclusion set in this study, SSI definition and data collection forms, could be used in a prospective surveillance program, to be planned having made sure to be able to implement a follow up. Afterwards, the protocol could be improved and proposed for adoption in a prospective multicenter surveillance system.

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