

Presentation title: Postoperative Surgical Site Infections in Spine Surgery: Can the Duration of Surgery Predict the Pathogen Spectrum?



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Abstract:

Background/aim: Surgical site infection (SSI) is a severe complication of spinal surgery, which typically results in prolonged length of hospital stay, an increased number of revision surgeries, re-hospitalizations, worse clinical functional outcomes, and increased healthcare costs. The aim of the present study was to analyse if the duration of surgery can predict the spectrum of pathogens causing SSI in orthopaedic spine surgery.

Patients and methods: We conducted a retrospective study over a period of two years at the University Hospital of Cologne in which all patients with postoperative surgical site infections were included. In addition to descriptive characteristics (such as sex, age, BMI), the duration of the surgery, the administration of intra-operative antibiotics, the main diagnosis, the

postoperative course of the infection parameters (CRP & WBC) and the responsible pathogens were analysed.

Results: A total of 75 patients were included with a median age of 64 years. The mean time of operation time was 131.52±70.91 min (range=23-285 min). The most frequently isolated germs in the postoperative blood culture were *S. aureus* (n=7), *S. haemolyticus* and *S. hominis* (n=2). There was a significant correlation between the duration of the primary surgical intervention and the postoperatively detected pathogens ($p=0.002$).

Conclusion: A significant correlation was shown between the duration of surgery and the species of pathogens detected causing postoperative SSI. The use of perioperative antibiotics, the use of longer-lasting antibiotics or the repeated intravenous administration of prophylactic antibiotics should be evaluated.

Conflict of interest statement: The Authors declare they have no financial interests. The Authors have no competing interests to declare that are relevant to the content of this article.

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