

Spine surgery infection treatment

Spine surgery infection treatment continues to be a challenge. Negative pressure wound therapy (NPWT) has been an effective method in the context of infection therapy, and its use has gained popularity in recent decades.

A study by Rickert et al. aimed to analyze the impact of known risk factors for postoperative wound infection on the efficiency and length of NPWT therapy until healing.

They analyzed 50 cases of NPWT treatment for deep wound infection after posterior and posteroanterior spinal fusion from March 2010 to July 2014 retrospectively. We included 32 women and 18 men with a mean age of 69 years (range, 36-87 years). Individual risk factors for postoperative infection, such as age, gender, obesity, diabetes, immunosuppression, duration of surgery, intraoperative blood loss, and previous surgeries, as well as type and onset (early vs. late) of the infection were analyzed. We assessed the associations between these risk factors and the number of revisions until wound healing.

In 42 patients (84%), bacterial pathogens were successfully detected by means of intraoperative swabs and tissue samples during first revision. A total of 19 different pathogens could be identified with a preponderance of Staphylococcus epidermidis (21.4%) and S. aureus (19.0%). Methicillin-resistant S. aureus (MRSA) was recorded in two patients (2.6%). An average of four NPWT revisions was required until the infection was cured. Patients with infections caused by mixed pathogens required a significantly higher number of revisions (5.3 vs. 3.3; $p < 0.01$) until definitive wound healing. For the risk factors, no significant differences in the number of revisions could be demonstrated when compared with the patients without the respective risk factor.

NPWT was an effective therapy for the treatment of wound infections after spinal fusion. All patients in the study had their infections successfully cured, and all spinal implants could be retained. The number of revisions was similar to those reported in the published literature. The present study provides insights regarding the effectiveness of NPWT for the treatment of deep wound infection after spinal fusion. Further investigations on the impact of potential risk factors for postoperative wound healing disorders are required. Better knowledge on the impact of specific risk factors will contribute to a higher effectiveness of prophylaxis for postoperative wound infections considering the patient-specific situation ¹⁾.

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Rickert M, Rauschmann M, Latif-Richter N, Arabmotlagh M, Rahim T, Schmidt S, Fleege C. Management of Deep Spinal Wound Infections Following Instrumentation Surgery with Subfascial Negative Pressure Wound Therapy. J Neurol Surg A Cent Eur Neurosurg. 2021 Jan 27. doi: 10.1055/s-0040-1720999. Epub ahead of print. PMID: 33506474.

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