Spinal instrumentation infection treatment

Optimal results are obtained with surgical debridement followed by parenteral antibiotics.

Until today the role of spinal instrumentation in the presence of wound infection has been widely discussed and many authors leave the hardware in place with appropriate antibiotic therapy [1].

Removal or replacement of hardware should be considered in delayed infections.

An improved understanding of the role of biofilm and the development of newer spinal implants has provided insight into the pathogenesis and management of infected spinal implants. It is important to accurately identify and treat postoperative spinal infections. The treatment is often multimodal and prolonged [2].

No level I or II evidence was identified. With regards to surgical management, five studies support instrumentation retention in the setting of early deep infection. In contrast, for delayed infection, the evidence favors removal of instrumentation at the time of initial debridement. Surgeons should be aware that for deformity patients, even if solid fusion is observed, removal of instrumentation may be associated with significant loss of correction. A course of intravenous antibiotics followed by long-term oral suppressive therapy should be pursued if instrumentation is retained. A shorter treatment course may be appropriate if hardware is removed [3].

Negative pressure wound therapy (NPWT) was an effective therapy for the treatment of wound infections after spinal fusion. All patients in the study of Rickert et al. 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 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 higher effectiveness of prophylaxis for postoperative wound infections considering the patient-specific situation [4].

References

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