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INFOGRAPHIC

Periprosthetic joint infection

PATIENTS BENEFIT FROM A MULTIDISCIPLINARY TEAM APPROACH

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Periprosthetic joint infections (PJIs) are often difficult to treat. Therefore, we established a so-called "Limb Board (EB)", a weekly collaborative case discussion round of all medical disciplines involved in the treatment. These include members of the department of trauma surgery, clinical microbiology, infectious diseases, diagnostic radiology, pathology, plastic and reconstructive surgery, vascular surgery, endocrinology, and psychosomatic medicine. During these meetings, each case is evaluated from all perspectives, optimal treatment strategies are developed for each individual patient based on collective expertise documented in the patient's medical record.

To evaluate the effectiveness of such an interdisciplinary strategy, a retrospective cohort study of patients treated for PJI, grouped in cases discussed in the EB meeting and cases, which were not part of the EB, was conducted in a university hospital centre in Germany. Patient characteristics, and details of infections and treatment procedure, were retrieved with a follow-up of 12 months. Treatment success was defined based on the Delphi criteria.[1] Amputation or a permanent Girdlestone situation were considered as treatment failure. Continuous parameters were compared by independent-samples *t*-test (significance level $p < 0.05$).

Neither sex, age, anatomical localization, Charlson Comorbidity Index (CCI), nor surgical procedure differed statistically significantly between the groups. The surgical revision rate, as well as the one-year mortality, was statistically significantly lower in EB patients compared to the control group. Furthermore, the EB group had a lower rate of recurrence of infection ($p = 0.122$) and reduced time between the first and second revision in cases of two-stage procedures ($p = 0.164$). Interestingly, even though not statistically significant, fewer patients were treated by a two-stage approach (25.0% vs 34.5%) and with a Girdlestone situation (5.0% vs 20.7%). Overall success rate was higher in the EB group ($p = 0.164$).

References

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Periprosthetic Joint Infection:
Patients benefit from a multidisciplinary team approach

49 patients

	20 with MDT	29 without MDT
Male	60.0%	62.1%
Mean age (years)	68.8	71.0
Charlson Comorbidity Index	1.2 [0-4]	1.5 [0-7]

vs.

- Lower revision rate — 1.7± 1.3 vs. 2.5± 1.3, *p*=0.04
- Lower 1-year mortality — n=1 vs. n=4, *p*< 0.001
- Lower rate of recurrence of infection within 1 year — 20% vs. 41%, *p*=0.12
- Higher success rate — 65.0% vs. 17.2%, *p*=0.16

Patients significantly benefit from a multidisciplinary treatment strategy