

Executive Summary

Publication	[Modular arthrodesis system (KAM-TITAN) after failed revision total knee arthroplasty: Operative technique and clinical experience]. [Article in German] Oper Orthop Traumatol. 2019 Jun 26. Doi: 10.1007/s00064-019-0605-9 [Epub ahead of print] Gathen M, Schmolders J, Wimmer MD, Gravius N, Randau TM, Gravius S, Friedrich M. https://www.ncbi.nlm.nih.gov/pubmed/31243472
Study	Retrospective analysis of clinical routine data
Implant	Modular knee arthrodesis KAM-TITAN (PETER BREHM GmbH, Germany)
Patients	n=27, n=15 female, n=12 male; average age at time of surgery 68 ± 10 years
Follow-up	30,9 ± 12,0 months
Method	A total of 27 patients were clinically and radiologically examined who treated with the KAM-TITAN modular knee arthrodesis system between January 2008 and June 2014. All patients had chronic infections (41% mixed infections, 37% difficult-to-treat germ). In the remaining 22% of cases (n=6) there was no germ detection. According to the <i>McPherson criteria</i>, the previous diseases and the local status were evaluated. The postoperative functional results were measured with the Oxford Knee Score (OKS). Postoperative pain intensity was measured using the visual analogue scale (VAS). The absence of infection was analysed according to the criteria of <i>Laffer et al.</i> (<i>Clin Microbiol Infect</i> 2006, 12). The <i>Kaplan-Meier analysis</i> was used to assess the probability of survival. The aim was to analyse the clinical course, the functional results and the complication rate.
Results	In the patients examined, the good postoperative result was confirmed with an OKS of 39.2 ± 8.3 points. The postoperative pain intensity had an average VAS value of 2.9 ± 1.3. The Kaplan-Meier survival rate of the modular knee arthrodesis KAM-TITAN was 85% (endpoint infection-free) in the follow-up period of 30.9 ± 12.0 months. The clinical results in this follow-up period are comparable to the results of knee arthrodeses described in other publications. The complication rate was 33% (n=9). In 15% of the cases (n=4) a persistent infection was present, in 11% of the cases (n=3) a soft tissue associated complication. The authors point out that strategies to avoid complications include an interdisciplinary approach with early efficient antibiotic treatment and, if necessary, plastic soft tissue coverage. According to the authors, the difference in leg length should not exceed 1 cm if possible.

Key Points	This retrospective study with 27 patients showed a survival rate of 85% for the modular knee arthrodesis system KAM-TITAN, good functional results with low postoperative pain and a low reinfection rate in the follow-up period of 30.9 ± 12.0 months. A further retrospective cohort study with 81 patients by <i>Hungerer et al. (2017)</i> has determined a survival rate of 86% after one year, 71% after 5 years and 61% after 10 years for the modular knee arthrodesis system KAM-TITAN. The survival rate of the modular knee arthrodesis system KAM-TITAN was considerably higher than literature data, which showed a survivorship of modular knee arthrodeses of 50% and 25% at 5 and 10 years, respectively.
Abbreviations	OKS - Oxford Knee Score, VAS - visual analogue scale

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