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Spacers for periprosthetic infections

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Two-stage revision is still considered the gold standard for the treatment of periprosthetic infections [1]. Advantages include high-dose local antibiotic therapy and repeated debridements of bone and soft tissue. Disadvantages are seen in multiple anesthetics and increased scarring and shrinkage of soft tissues. Local antibiotic therapy is provided by using prefabricated cement with different antibiotics or adding thermoresistant antibiotics to the cement *off label* in the operating room [2–4]. Specialized knowledge is necessary for this and for the manual production of the spacers. However, the application of commercial spacers also requires special skills.

Therefore, we decided to compile the different possible variants in order to present specifically the technical aspects of the method. Of course, there are other ways to use spacers or to decide to treat without them in the case of a two-stage revision. We present here well-established and tested techniques that are very successful in our hands and allow both mobile spacers and static joint bridging in the sense of a temporary arthrodesis.

This is required at the knee joint, for example, if the ligaments already have been damaged by the infection so much that they had to be resected. Of course, this procedure has an influence on the further choice of implants that will be used for the final restoration. Constrained implants, partial femoral replacements or even arthrodesis are then required [5].

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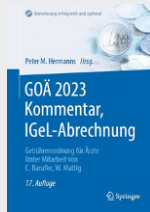


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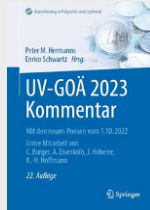
References

1. Parvizi J, Gehrke T (2013) Proceedings of the international consensus on periprosthetic joint infection. <https://doi.org/10.1302/0301-620X.95B11.33135>
2. Lüdemann M, Konrads C, Rudert Polymethylmethacrylat M(2017) (PMMA)-Knochenzement als Medikamententräger in der Endoprothetik. Chir Allg Z 18(10):455–459
3. Boelch SP et al (2018) Comparison of elution characteristics and compressive strength of biantibiotic-loaded PMMA bone cement for spacers: copal(R) spacem with gentamicin and vancomycin versus palacos(R) R+G with vancomycin. Biomed Res Int. <https://doi.org/10.1155/2018/4323518>
4. Boelch SP et al (2017) Loading with vancomycin does not decrease gentamicin elution in gentamicin premixed bone cement. J Mater Sci Mater Med 28(7):104. <https://doi.org/10.1007/s10856-017-5915-6>.
5. Kohlhof H et al (2020) Distal femur replacement in extensive defects of the distal femur in revision arthroplasty. Oper Orthop Traumatol 32(4):340–358. <https://doi.org/10.1007/s00064-020-00667-7>

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