

Endoprosthetic surgery of the elbow

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Artificial joint replacement has found a firm place in orthopaedic surgery since its first introduction in the late 1960s. While the initial fixed bearing implants tended to progress to early loosening, the development of so-called "sloppy joints" has seen a major advance in the survival and success rate of this arthroplasty. The surgical approach and technique have also been modified in such a way as to allow a complete ventral release of a flexion contracture, while at the same time preserving the integrity of the extensor mechanism. In this way, the improvement of the biomechanics of the implant combined with diligent surgical technique have enhanced this procedure dramatically. Between 1978 and 1999, 305 GSB 3-type prosthesis were implanted, with the underlying pathologies being rheumatoid arthritis (77%), posttraumatic arthritis (21%) and degenerative arthritis (2%). The range of motion could be significantly improved from the pre-operative state for extension as well as flexion. This was even more obvious in the rheumatoid than in the posttraumatic situation. The survival rate for this type of implant was 90% at 10 years, with the implants after rheumatoid surgery faring somewhat better than those of the posttraumatics. Alternative treatment options, such as resection arthroplasty, distraction arthroplasty, or arthrodesis, are nowadays employed only in rare cases where a previous infection, personal preference or an inability by the patient to co-operate in a rehabilitation program have to be considered. The overall functional results of these types of treatments seem to be inferior to that of elbow arthroplasty. Therefore, this procedure is recommended not only for advanced degenerative and rheumatoid pathologies, but also in cases of posttraumatic arthrosis.