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Drawbacks of Total Ankle Replacement

Arora Julian*

Department of Orthopedics, University De Bordeaux, France

Abstract

Total Ankle Replacement (TAR) has emerged as a viable surgical option for patients with end-stage ankle arthritis, offering the potential for pain relief and improved function. However, despite advancements in implant design and surgical techniques, TAR is associated with several drawbacks and limitations that warrant careful consideration. One of the primary drawbacks of TAR is the risk of implant-related complications. While modern implants aim to replicate normal ankle biomechanics, complications such as loosening, subsidence, component wear, and osteolysis can occur, leading to implant failure and the need for revision surgery. Additionally, malalignment, instability, and impingement may result from improper implant positioning or inadequate soft tissue balancing, further contributing to poor outcomes. This abstract provides an overview of the drawbacks of total ankle replacement based on current literature and clinical experience.

Keywords: Total ankle replacement; stage ankle arthritis; surgical techniques; ankle biomechanics; osteolysis; malalignment

Introduction

Total Ankle Replacement (TAR) has evolved as a promising surgical intervention for patients suffering from end-stage ankle arthritis, offering an alternative to traditional ankle fusion. While TAR holds the potential for pain relief, improved function, and preserved ankle motion, it is not without its drawbacks and limitations. This introduction provides an overview of the drawbacks associated with total ankle replacement, highlighting the complexities and considerations involved in this surgical procedure. Despite advancements in implant design, surgical techniques, and postoperative care, TAR poses inherent challenges that must be carefully weighed by both patients and healthcare providers. One of the primary drawbacks of TAR is the risk of implant-related complications. Despite improvements in implant materials and fixation methods, complications such as loosening, subsidence, component wear, and osteolysis remain significant concerns. These complications can compromise the longevity of the implant and necessitate revision surgery, leading to additional morbidity and healthcare costs [1, 2].

Description

The longevity of TAR implants is limited compared to other joint replacements, such as total hip or knee replacements. High rates of revision surgery have been reported, particularly in younger, more active patients, due to implant wear and mechanical failure over time [3]. This underscores the importance of careful patient selection, considering factors such as age, activity level, and bone quality, when determining the suitability of TAR as a treatment option. Functional outcomes following TAR may also be variable, with some patients experiencing residual pain, stiffness, and functional limitations postoperatively. While many patients achieve significant improvements in pain and function, others may require ongoing rehabilitation and experience suboptimal outcomes despite surgical intervention [4, 5]. Understanding the factors contributing to variability in outcomes, such as preoperative ankle deformity, ligamentous laxity, and patient expectations, is essential for optimizing patient selection and managing postoperative expectations. Psychosocial factors also play a crucial role in the success of TAR. Unrealistic patient expectations, coupled with the potential for prolonged recovery and rehabilitation, can lead to dissatisfaction and psychological distress postoperatively. Addressing patient concerns, providing comprehensive preoperative counseling, and managing expectations are essential for ensuring patient satisfaction and optimizing outcomes following TAR [6, 7]. One of the primary drawbacks of TAR is the risk of implant-related complications. Despite efforts to optimize implant materials and design, complications such as loosening, subsidence, component wear, and osteolysis can occur. These complications may necessitate revision surgery, leading to additional morbidity, prolonged recovery, and increased healthcare costs [8]. Furthermore, the longevity of TAR implants is limited compared to other joint replacements, with high rates of revision surgery reported, particularly in younger and more active patients. Functional outcomes following TAR can also be variable. While many patients experience significant improvements in pain relief and mobility, others may continue to experience residual pain, stiffness, and functional limitations postoperatively [9]. Factors such as pre-existing deformity, ligamentous laxity, and patient expectations can influence outcomes and contribute to variability in results. Additionally, rehabilitation following TAR is often prolonged and challenging, requiring strict adherence to postoperative protocols and ongoing physiotherapy to optimize outcomes. Psychosocial considerations are also important in the evaluation of TAR. Unrealistic patient expectations, coupled with the potential for a lengthy recovery period, can lead to dissatisfaction and psychological distress postoperatively. Therefore, comprehensive preoperative counseling and education are essential to manage patient expectations and ensure informed decision-making regarding the risks and benefits of TAR [10, 11].

Conclusion

In summary, while total ankle replacement offers significant potential benefits for patients with end-stage ankle arthritis, it is important to acknowledge and address the associated drawbacks. Implant-related complications, limited implant longevity, variable functional outcomes, and psychosocial considerations underscore

***Corresponding author:** Arora Julian, Department of Orthopedics, University De Bordeaux, France, E-mail: arorajulian@u-bordeaux.fr

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the need for careful patient selection, shared decision-making, and ongoing research to improve the overall success and durability of TAR. By understanding and mitigating these drawbacks, healthcare providers can optimize patient outcomes and satisfaction following total ankle replacement.

References

1. Randser EA, Riley MA, Berbaum KS, el-Khoury GY, Bennett DL (1996). MR imaging of anterior cruciate ligament injury: Independent value of primary and secondary signs. AJR Am J Roentgenol. 167: 121-126.
2. Brown TR, Quinn SF, Wensel JP, Kim JH, Demlow T (19895). Diagnosis of popliteus injuries with MR imaging. Skeletal Radiol. 24: 511-514.
3. Buckwalter KA, Braunstein EM, Janizek DB, Vahey TN (1993). MR imaging of meniscal tears: narrow versus conventional window width photography. Radiology. 187: 827-830.
4. Buckwalter KA, Pennes DR (1990).Anterior cruciate ligament: oblique sagittal MR imaging. Radiology.175: 276 -277.
5. Burke BJ, Escobedo EM, Wilson AJ, Hunter JC (1998). Chondrocalcinosis mimicking a meniscal tear on MR imaging: a case report. AJR Am J Roentgenol. 170: 69 -70.
6. Campbell SE, Sanders TG, Morrison WB (2001). Magnetic resonance imaging of meniscal cysts: incidence, location and associated findings. Am J Roentgenol. 176: 85-86.
7. Campos JC, Chung CB, Lektrakul N, Pedowitz R, Trudell D, et al (2001). Pathogenesis of the Segond fracture: anatomic and MR imaging evidence of an iliotibial tractor anterior oblique band avulsion. Radiology. 219: 381-286.
8. Cobby MJ, Schweitzer ME, Resnick D (1992). The deep lateral femoral notch: an indirect sign of a torn anterior cruciate ligament. Radiology. 184: 855-858.
9. Cotten A, Delfaut E, Demondion X, Lapegue F,Boukhelifa M, et al. (2000). MR imaging of the knee at 0.2 and 1.5 T: correlation with surgery. Am J Roentgenol. 174: 1093-1097.
10. Crues JV, Mikn J, Levy TL, Lotysch M, Stoller DW (1987). Meniscal tears of the knee: accuracy of magnetic resonance imaging. Radiology. 164: 445-448.
11. Graf BK, Cook DA, DeSmet AA, Keene JS (1993). Bone bruises on magnetic resonance imaging evaluation of anterior cruciate ligament injuries. Am J Sports Med. 21: 220-223.