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No. 89**Total ankle replacements are an increasing reality in Italy: Analysis of temporal trends between 2001 and 2022 on the National Hospital Discharge Record database.**

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Introduction

End-stage osteoarthritis (OA) of the tibiotalar joint is a leading cause of pain, loss of function, decreased quality of life, and even disability. Total ankle replacement (TAR) is one of the surgical options for patients affected by OA who fail conservative treatments. Within the Italian Arthroplasty Registry (RIAP) framework, this study aimed to analyse temporal trends of TARs over 22 years (2001-2022) in Italy with a focus on patient demographics and hospital activity volume.

Materials and methods

Records related to TARs from 2001 to 2022 were identified by ICD9-CM codes (81.56) and extracted from the National Hospital Discharge Record (HDR) database. Temporal trends in TARs were analysed overall and stratified by age, sex, and hospital activity volume. Statistical significance of trends was assessed using the Cox-Stuart test.

Results

Between 2001 and 2022, 8,853 TARs were extracted from 231,601,523 admissions registered at the national level. TARs increased from 96 in 2001 to 996 in 2022 and were mainly performed on males and patients aged between 55 and 64. The tendency to perform TARs in high-volume hospitals has increased, with those performing annually more than 100 interventions covering more than 40% of the total in 2022.

Discussion

The study highlighted a significant increase in TARs performed in Italy. Patients undergoing this arthroplasty are generally younger than patients undergoing other joint replacements, and the proportion of males is higher. Interventions are increasingly performed in high-volume hospitals, possibly because such structures have become highly specialised over time or because more surgeons provide TAR indications for a wider range of health conditions. Given the high increase in TARs and the lack of specific revision ICD9-CM codes, well-functioning registries and monitoring of the devices involved are essential to monitor procedure outcomes and medical device safety.

Notes