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RHEUMATOID FOREFOOT RECONSTRUCTION FOLLOWING HOFFMANN-CLAYTON PROCEDURE WITH PLANTAR APPROACH — A 5-YEAR FOLLOW-UP

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BACKGROUND

Rheumatoid arthritis (RA) can cause significant forefoot disorders. Despite major improvements in drug therapy the inflammatory process can lead to severe joints destruction, causing substantial deformities, particularly if the drug therapy fails. Thus, patients with RA and a failure of antirheumatism medication (disease-modifying antirheumatic drugs [DMARDs]) can have a significant forefoot deformity with pain, and loss of mobility and function. Such patients will likely need to wear orthopedic shoes and in severe cases will require surgical treatment.

The purpose of the study:

To analyze the outcomes of surgical forefoot correction per Hoffmann-Clayton, which involves resection of the metatarsal heads of lesser toes through transverse-plantar approach.

MATERIALS AND METHODS

This retrospective study used patient-based questionnaires to analyze the revision rate, pain, use of orthoses, walking ability, forefoot function, and patient satisfaction of patients with RA who had undergone a complete forefoot correction of II to V metatarsophalangeal (MTP) joints according to Hoffmann-Clayton procedure and arthrodesis of 1st MTP joint. The study included 28 patients (50 feet) aged around 45 ± 4.5 years.

RESULTS

The data collected showed that 17 reoperations were performed on 12 of the patients. Deformity relapses were often documented for the hallux valgus.

More than 60% of the patients were able to wear conventional shoes. The distances the participants were able to walk were significantly increased by wearing shoes when compared with walking barefoot ($P < .01$).

DISCUSSION

With an average follow-up time of 5 years, this study of forefoot reconstructions per Hoffmann-Clayton is useful follow-up study of its kind. The main surgical aim of the Hoffmann-Clayton procedure for RA-associated forefoot disorder is pain reduction, regaining the ability to use conventional shoe wear, and maintaining the forefoot function. Although joint protection and/or maintaining interventions are now more frequently successful after the introduction of DMARD therapy, the metatarsal head resection of the lesser toes II to V remains the gold standard therapy for the severely deformed rheumatoid forefoot.

CONCLUSION

While forefoot function remained difficult to assess, the majority of patients were able to use conventional shoes. This long-term follow-up study of patient-reported questionnaires completed more than 5 years after the Hoffmann-Clayton procedure showed that more than 80% of the patients remained satisfied with the outcome.

Keywords:

foot, foot function, forefoot surgery, hallux valgus, rheumatoid foot