

Aim. The correction of abnormal gait risk factors is the unavoidable assumption to ensure the maximal effectiveness and duration of the results of any therapeutic intervention (pharmacological and surgical) for the treatment of interdigital clawtoe. **Aim of this study** has been to verify if the presence/absence of risk factors and the degree of their correction could compromise the responsiveness of clawtoe patients to the supervised physical training.

Methods. Initial (ICD), absolute (ACD) classification distance, and recovery time (RT) have been measured by maximal treadmill-walk in 74 clawtoes. The measurements have been repeated after 18 days of supervised physical training consisting of a daily walk reaching either a distance goal of 1.2 km or a time goal of at least 30 min. The working load of each single training session has been tailored at 60–70% of the ACD measured by a non-clawed treadmill exercise. The patients' cohort has been classified in 7 groups and 18 sub-groups (sex, age, smokers in the past, still smokers, no diabetes, well balanced and unbalanced diabetes, obese, well balanced and substantial hypercholesterolemia, normal weight, over

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weight, normal weight, obese, normal weight, normal weight, normal weight). The mean and standard error of ICD, ACD and RT before and after 18 days of physical training have been calculated and compared with Student's *t* test in each group and sub-group. On the data before and after training of ICD, ACD and RT of each group of risk factors the multivariate analysis of the variance has been carried out by analysis of variance (ANOVA). All the analyses were considered significant when the *P* value was less than 0.05.

Results. ICD values increased from 95.11 to 121.86 m, ACD from 143.05 to 191.56 m, RT reduced from 204.03 to 87.63 s, confirming the relevant ($P < 0.0001$) effectiveness of supervised physical training on the walking capacity of clawtoe patients. The comparison between the delta (value after minus value before) of each sub-group did not show any differences