An exercise programme for patients with diabetic complications: a study on feasibility and preliminary effectiveness.

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Abstract

AIMS:
To investigate the feasibility and preliminary effectiveness of an exercise programme for patients with diabetic complications.

METHODS:
In this pre-post design study, 22 patients from a diabetic foot outpatient clinic participated in a 12-week individualized exercise programme, consisting of aerobic and resistance exercise, with specific safety precautions. Feasibility was assessed on the basis of programme adherence, adverse events, achievement of the target training intensity and patient satisfaction. Preliminary effectiveness was evaluated with pre-post-changes in blood glucose regulation (HbA(1c)), muscle strength (isometric peak torque) and perceived limitations in functioning (Patient Specific Function Scale with visual analogue scale).

RESULTS:
Twenty patients completed the exercise programme with a high mean attendance (85%). No training-related severe adverse events occurred. The target training intensity was achieved by 70% of the participants. Patient satisfaction was high. HbA(1c) decreased from 8.2% before to 7.8% after the programme (P=0.005), muscle strength increased from 136.4 to 150.4 Nm (P=0.046) and perceived limitations in functioning decreased from 7.2 to 5.8 mm (P=0.003).

CONCLUSIONS:
The prescribed exercise programme had a potentially positive effect on blood glucose regulation, muscle strength and perceived limitations in functioning in patients with diabetic complications.

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