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Osteoarthritis, Digital First - Line Treatment and Future Need for a Total Joint Replacement

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Osteoarthritis (OA) is the most common joint disease. It generates symptoms of pain and impaired physical function with a substantial impact on quality of life. OA contributes increasingly to the global burden of disease in adults. End stage knee and hip OA can be successfully managed by a total joint replacement operation (TJR) with a prosthesis.

Unfortunately some 20 % of patients are not satisfied after a TJR.

Many studies have calculated a future increased need of total joint replacement due to an increase of BMI and the level of sedentary lifestyle in the population. At the same time other studies suggest that OA disabilities to a large extent can be managed by first line core treatment including exercise, education and weight control. However, a recent meta-analysis of studies evaluating care for people with OA showed that first line treatment is not well implemented, less than 40% of the OA population had received this type of treatment (4).

A way to facilitate implementation of first line OA treatment is to develop digital programs that enables easy access to care, is open 24/7 and can be used wherever patients are located. Studies have shown pain and function improvement as well as change in willingness to have an operation after six weeks in a digital program. The intervention program consists of daily distributed video instructions for neuromuscular exercises and information of OA symptoms and its management based on current guidelines and research in the form of text lessons. Additionally, continuous access to and dialogue with a physiotherapist is provided.

It has been shown that the ability to walk 6 000 steps/day is a possible estimate of the level of walking activity to protect against developing functional limitation in people with knee OA. Furthermore, it is suggested that the “sit to stand” clinical test of physical function is a proxy for 6 000 steps/day walking ability is related to satisfactory Health-Related Quality of Life (HRQL). The present study describes the digital program and examines the change in willingness to have surgery after six months of treatment.

Methods

To be included in the study patients had a hip or knee OA diagnosis, had followed the digital program for six months and have performed a sit to stand test at start and at 6 months. Adding on, included participants reported symptoms severe enough for needing a TJR at baseline.

Results

173 patients with a mean age (SD) of 62 (8); mean BMI (SD) 28,5 (5,8); mean adherence % (SD) 74% (20%) fulfilled the inclusion criteria.

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After six months of continuous participation in the digital program, 48% (83/173) individuals no longer reported a need for a TJR. The remaining 52% still considered needing surgery.

Discussion

Evidence-based nonsurgical OA treatment may reduce the need for surgery and should therefore be offered as the first-line treatment option to patients with hip and knee OA. The results also support the idea that such treatment programs have the potential to improve selection of patients for total joint replacement.