Functional Impairment in Patients with RA in an Eight Year Perspective

FoU Spenshult

Reumatologisk forskning och utveckling

A. Bremander [1, 2, 3,] K. Forslind[4, 5], K. Eberhardt[1], M. Andersson[1, 3]

[1]Department of Clinical Sciences, Section of Rheumatology, Lund University, Lund, [2]School of Business, Engineering and Science, Halmstad University, [3]Spenshult Research and Development Centre, Halmstad, [4]Department of Clinical Sciences, Section of Rheumatology, Lund University, Lund and Helsingborg, [5]Department of Research and Education, Helsingborg´s hospital, Helsingborg, Sweden

Conclusion:

Functioning as assessed by SOFI improved during the first year in patients with early RA and then deteriorated slowly.

Over a longer period, pincer grip and toe standing seemed to be the two most important items to measure when assessing functional impairment over time.

Background:

Observational performance tests is a complement to self-reported measures of physical functioning. The Signal Of Functional Impairment (SOFI)[1] is a performance test which so far has been applied only in Sweden commonly used in the clinic and in long term follow-up clinical studies in people with Rheumatoid arthritis (RA).

Objectives:

The aim was to study performance-based function assessed with SOFI over 8 years and, secondly, to study which items included in SOFI that were associated with change in functioning over time.

Methods:

An inception cohort of 1 052 patients with early RA, from the BARFOT-study, recruited 1992-2006 was investigated, mean age 54 (SD 14) years, 70% were women. Data on SOFI at baseline, 1 year and at 8 years were included in the study.

SOFI Hand function; cylinder grip (**H1**), pen grip (**H2**), pincer grip (**H3**) and opposition of the thumb (**H4**).
Arm function; hand behind the head and the ability to touch the cervical spine processes with fingers (**A1**), elbow supination (**A2**) and elbow extension (**A3**).
Leg function; the ability to touch the opposite knee with the heel while sitting (**L1**), knee extension in supine position (**L2**), dorsiflexion of the foot standing on a balance board (**L3**), and toe standing (**L4**).
An assessor scores the patient´s ability to perform the items on an ordinal scale (0=normal, 1= partly impaired and 2= unable to perform). The range of SOFI total score is 0-44 (best to worst).

References:
1Kerstin B. Eberhardt, B. Svensson and U. Moritz. Functional assessment of early rheumatoid arthritis
British Journal of Rheumatology 1988;27:364-371.

Results:

At baseline the mean (SD) SOFI was 7.2 (5.8), and at 1 year follow-up the improvement was 2.75 (5.65), p<0.001. From 1 year to 8 year follow-up the deterioration was 1.5 (4.6), p<0.001. When studying hand, upper and lower function separately, the pen grip and toe standing improves most during the first year. From 1 to 8 year the pincer grip and toe standing are the items that deteriorate most (Figure). Assessment of the pen grip, the pincer grip and toe standing explain 58% to 70% of the SOFI score over time, with the highest rate at 8 years follow-up (70%).

Contact:
ann.bremander@spenshult.se

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