Editorial

Fatigue in patients with rheumatoid arthritis: what is known and what is needed

Concept and definition

Fatigue is, just like pain, a subjective symptom which may occur in patients with many different diseases and thereby also in patients with RA. In the literature, a consensus definition for fatigue is not presented. However, most authors define fatigue as: ‘an overwhelming, sustained sense of exhaustion and decreased capacity for physical and mental work’ [1]. For chronic fatigue, Piper’s definition is widely used in international studies and is as follows: ‘chronic fatigue is perceived as unpleasant, unusual, abnormal or excessive whole-body tiredness, disproportionate to or unrelated to activity or exertion and present for more than one month. Chronic fatigue is constant or recurrent, it is not dispelled easily by sleep or rest and it can have a profound negative impact on the person’s quality of life’ [2]. To distinguish between chronic fatigue and the chronic fatigue syndrome (CFS), the Centre for Disease Control and Prevention (CDC) has formulated special criteria for CFS [3].

In published studies, fatigue is mostly described as a multi-causal, multidimensional and complex concept in which psychological, biochemical and physiological mechanisms play a role. As with pain, the definition is not the most important issue in clinical practice but the way fatigue can and should be assessed is, because quantifying fatigue enables us to study fatigue.

Assessment instruments

Researchers have made great efforts to develop assessment instruments to diagnose or evaluate fatigue severity; however, at this moment no gold standard is available. A systematic review of scales which are being used to assess RA fatigue revealed only six scales with evidence of reasonable validation: the Multidimensional Assessment of Fatigue scale (MAF), the Short Form 36 vitality subscale (SF36-vitality), the Functional Assessment of Chronic Illness Therapy fatigue scale (FACIT-F), the Profile of Mood States (POMS), visual analogue scales (VAS) and ordinal scales (‘no’ to ‘very severe’ fatigue) [4]. However, the researchers concluded that further validation of scales for RA fatigue is needed.

As fatigue is a multidimensional concept, the use of a multidimensional scale offers the possibility to measure the full spectrum of the fatigue complaint and will help to identify different outcomes for fatigue interventions. Such a multidimensional instrument, which is already being used to measure RA fatigue, is the Checklist Individual Strength (CIS), with four dimensions of fatigue, namely: fatigue severity, motivation, concentration and activity. Furthermore, based on research on patients with CFS, cancer survivors and healthy controls, cut-off scores for the CIS-fatigue are available, offering the possibility to distinguish between normal, moderate and severe fatigue (severe fatigue is CIS-fatigue \( \geq 35 \)) [5, 6]. The CIS has been used in a single study on RA fatigue [5], but was previously used in patients with many different diseases and showed good reliability, discriminative validity and sensitivity to change [7–11].

To compare results from different studies on RA fatigue, the use of a valid scale to measure fatigue is necessary. Researchers in the Netherlands are currently validating the CIS for RA and hopefully validation in other countries will follow. Besides, researchers in the United Kingdom are developing and validating a VAS scale for RA fatigue which, after further validation, could help to assess fatigue in daily practice.

Finally, although fatigue is a common symptom in RA, it is not yet, just like pain, a recommended core outcome for clinical trials [12, 13]. The ‘core set’ of outcome measures for RA clinical trials has been developed at OMERACT 1 in 1992 (Outcome Measures for Arthritis Clinical Trials) [14]. And, only at the workshop of OMERACT 8 in 2006, it was concluded that fatigue is a symptom that is important to RA patients and should be measured in all RA clinical trials whenever possible. The research agenda for fatigue that emerged from OMERACT 8 focuses on the validity of the assessment instrument for RA fatigue, the relationship between fatigue and other outcomes and the consequences of fatigue [15]. This will help to develop and test interventions.

Prevalence, course, severity and predictors of fatigue

Due to differences in definition and instruments to measure RA fatigue, prevalence rates between 42% and 80% have been found [16–19]. Measured with the CIS, 40% of RA patients experience persistent severe fatigue, a level of fatigue that is comparable with fatigue as experienced by patients with CFS [5].

In studies on correlates and predictors of fatigue contradictory results were found. The first question is, is fatigue related to disease activity? In some studies, the evidence for the relation between disease-related variables and fatigue is found. In other studies, higher levels of fatigue were associated with increased depressive symptoms, pain, disturbed sleep, increased physical effort, gender or psychosocial factors [5, 20]. Although these variables are not directly disease related, the question remains unanswered about the indirect relation between these items, e.g. disturbed sleep may be related to disease activity and as a consequence also related to fatigue. A combination of variables might be the underlying mechanism for RA fatigue. However, no prospective study has included all these variables. In spite of the sometimes inconsistent findings, consensus on the large impact fatigue has on quality of life in RA patients exists [21, 22].

The patient’s experience

For patients with RA fatigue is, besides pain, the most bothersome symptom to handle [23, 24]. RA patients described fatigue as unpredictable, overwhelming and different from normal tiredness because it is extreme, often not earned, unresolved and has a greater impact on daily life than pain [6, 23]. For most patients fatigue is caused by RA, the inability to perform daily activities or an unrefreshing sleep [6, 23]. RA patients struggle and manage fatigue by trial and error and—with limited success—use self-management strategies. Most patients do not discuss fatigue with their healthcare professionals because they feel it is dismissed or they simply accept fatigue as being part of the disease.

Current care for fatigue

There are no published studies on current care for RA fatigue. In a yet unpublished, postal survey about knowledge, attitude and current management of RA fatigue among 232 British and Dutch...
rheumatology nurses and 110 Dutch rheumatologists, it was shown that healthcare professionals have accurate knowledge of and a positive attitude towards RA fatigue. With regard to the management of fatigue in daily practice, the results revealed two main findings. First, rheumatology nurses seldom refer patients to other disciplines although they believe that other team members could help the patient with fatigue. Second, rheumatologists pay attention to fatigue in the first consultation and less often during follow-up consultations.

A combined qualitative and quantitative study, in which 20 patients were videotaped during their out-patient consultation at the Department of Rheumatology revealed four major results. First, patients more often use implicit cues instead of explicit concerns related to fatigue. Second, fatigue is communicated in almost all consultations with nurse specialists and in less than half of the medical consultations. Third, it is rather the patient than the healthcare professional who raises the issue of fatigue during the consultation. Fourth, in general, nurse specialists use more adequate responses to patients’ cues or concerns about fatigue than rheumatologists do.

**Treatment of fatigue**

Disappointingly, given the fact that fatigue is by now recognized as a common symptom of RA, only few studies have focused on the treatment of RA fatigue. Studies on the effectiveness of biologic agents showed evidence of significant improvements in RA fatigue [25, 26]. Moreover, the results of a randomized controlled study of cognitive-behavioural therapy (CBT) showed significant improvement in fatigue [27]. Also, a randomized controlled study on non-pharmacological interventions on home aerobic training demonstrated a trend towards improvement of fatigue [28].

Other interventions need to be tested. For example, we do not know the effects of nursing interventions on fatigue, such as advice regarding sleeping patterns, the balance between activity and rest, or social support, as components of self-management strategies. Otherwise, as CBT seems to be effective, is it possible for other members of the rheumatology team to deliver special interventions of that therapy?

Although, until now, causes of fatigue are unknown and RA patients with even a low to moderate disease activity have severe fatigue, healthcare professionals should pay attention to, assess and manage fatigue routinely and effectively, in the same way as they manage pain.

**Conclusions**

**What is known?**

(i) Fatigue is a common, severe and chronic complaint of patients with RA.

(ii) RA fatigue is overwhelming and has a large impact on quality of life.

(iii) Patients and healthcare professionals do not know enough about how to manage fatigue.

(iv) Fatigue is, just like pain, not structurally discussed with patients.

**What is needed?**

(i) A validated assessment instrument for RA fatigue is needed to facilitate comparison of results across studies. For research purposes, the multidimensional aspect of fatigue must be represented in the measurement instrument. For daily clinical assessment, a brief and simple assessment instrument would be most appropriate.

(ii) Information about causes and treatment of RA fatigue is needed to support and help patients in using self-management strategies. Also, more research is needed to accomplish evidence informed practice for RA patients.

(iii) As with pain, fatigue should be addressed and explored systematically in clinical practice, instead of waiting for the patients to mention the symptom spontaneously.

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**References**


