

Excluded: Procedure not routinely funded

Bedfordshire, Hertfordshire, West Essex and Milton Keynes Priorities Forum statement

Number	101
Subject	Residential exercise therapy/rehabilitation courses for the management of Ankylosing Spondylitis
Date of decision	May 2019
Date of review	May 2022

GUIDANCE

Residential treatments for the management of Ankylosing Spondylitis are not routinely funded. Therapy/rehabilitation should be commissioned locally.

Introduction:

Ankylosing spondylitis (AS) is a chronic, inflammatory spinal condition which affects about one in 200 people in this country, with the male to female ratio being about 2-3:1¹, with an estimated prevalence of 6000 patients in Hertfordshire. Spinal inflammation causes pain and stiffness and if left untreated can cause a fixed, stooped posture. The most common age of onset is in early adulthood, therefore the lifetime individual impact of AS can be high. In some patients peripheral joints such as hips and shoulders are also involved². The condition can also affect the eyes, lungs and heart. Physical therapy is considered an important part of the overall management of AS.

The role of exercise features prominently in relevant clinical guidelines for the management of AS ([NICE clinical knowledge summary](#)), and is supported by a mixed range of quality of evidence. Published studies mainly focus on mobility exercises, with only a small number of studies reviewing strengthening, balance or cardio-respiratory exercise, with a limited number of studies taking into account the setting these are delivered³.

Background:

Locally there have been a small number of requests for intensive, time-limited (residential) exercise modalities which include in-patient rehabilitation or spa-therapy/exercise combinations. The residential exercise therapy/rehabilitation courses are typically two weeks and are targeted at the following people:

- New diagnosis
- Those experiencing a flare of their condition
- People post-surgery, for example after hip replacement
- Maximise outcome on anti-TNF therapy

Taking an MDT approach the patient is usually supported in the following areas:

- **education:** helping patients learn about their disease and its management
- **exercise:** reducing pain and stiffness, maintaining erect posture and preserving mobility through graded exercises and stretches (including hydrotherapy)
- **pain management:** development of pain-management strategies
- **networking:** providing the opportunity to meet, learn from and work with other patients.

In order to ensure an equitable use of finite CCG resources, a desk-top review of published evidence was undertaken for residential therapy interventions to support the management of patients with AS. In 2008, Cochrane undertook a systematic review of '*physical therapy interventions for ankylosing spondylitis*'. The review⁴ focussed on scientific evidence on the effectiveness of physiotherapy interventions in the management of AS. The review included 11 trials, with a total of 763 participants, published prior to January 2007.

The outcomes analysed were pain, stiffness, spinal mobility, physical function and patient global assessment. All interventions were more beneficial than no intervention or "usual care." Several trials were based on intensive, time-limited exercise interventions, such as in-patient rehabilitation or spa-therapy/ exercise combinations. The systematic review found that in-patient spa exercise therapy plus group therapy was found to be more effective than group therapy alone; individual home-based or supervised exercise programs were better than no intervention, but supervised group physiotherapy was better than home exercises.

Since the Cochrane review was undertaken there has been four further RCT^{5,6,7,8} studies been published but these collectively demonstrate the difficulties in determining the effects of exercise type versus setting versus mode of delivery. Although different exercise settings appear to play a role in overall outcome, it is not possible to quantify whether benefits are due to the change in setting or environment, or the consequential support for motivation, adherence and higher exercise that may arise from supervision and/or a group mode of delivery. Unfortunately, since it is not possible to separate the effects of exercise in warm water from other passive components of spa therapy, there is currently insufficient evidence to support this. Two studies^{9,10}-one RCT, found that Balneotherapy has a supplementary effect on improvement in disease activity and functional parameters in AS patients immediately after the treatment period, but further research is needed to assess the role of balneotherapy applied for longer durations in AS patients.

Unfortunately the published studies do not provide sufficient information about disease progression: given that some subjects may start from a relatively low baseline, longer studies are therefore required. In addition the majority of the studies have not considered the long-term outcomes and/or self-management strategies would be more relevant with CCGs finite resources.

Cost effectiveness.

There are limited numbers of studies evaluating the cost effectiveness of different therapy interventions. Residential courses cost CCGs approximately £3,800 per patient for the two week period, which is in addition to the routine management of these patients. As the longer term outcomes of residential courses has not been fully evaluated it is difficult to equate cost savings, but supporting a patient to self-manage their condition will have a positive impact on the patients' health and wellbeing.

Conclusion:

Despite the advances in the pharmacological therapy of ankylosing spondylitis, physical therapy remains an essential part of the management of these patients. Reviewing the published studies there was insufficient evidence to show that one type of activity is more beneficial.

The evidence is further constrained by very little research on the dosage (frequency, intensity and duration), stage of disease or adherence to recommended programs. Longer follow-up of the patients is therefore required in future studies to ensure that outcomes are assessed over time.

There are currently two relevant Cochrane reviews underway '[Exercise therapy in ankylosing spondylitis](#)' and '[Self-management programme for ankylosing spondylitis](#)'. This policy should be reviewed on their publication.

References:

1. M. Dougados, D. Baeten Spondyloarthritis Lancet, 377 (2011), pp. 2127-2137
2. S. Ozgocmen, O. Akgul, Z. Altay, O. Altindag, O. Baysal, M. Calis, *et al.* Expert opinion and key recommendations for the physical therapy and rehabilitation of patients with ankylosing spondylitis Int J Rheum Dis, 15 (3) (2011), pp. 229-238
3. Miller *et al.*, (2016), Exercise for ankylosing spondylitis: An evidence-based consensus statement, *Seminars in Arthritis and Rheumatism*. Vol. 45, (Issue 4), Pages 411-427
4. Dagfinrud H, Hagen KB, Kvien TK. Physiotherapy interventions for ankylosing spondylitis. Cochrane Database of Systematic Reviews 2008, Issue 1.
5. S.B.L. Masiero, M. Pigatto, A. Lo Nigro, R. Ramonda, L. Punzi Rehabilitation treatment in patients with ankylosing spondylitis stabilized with tumour necrosis factor inhibitor therapy. a randomized controlled trial J Rheumatol, 38 (7) (2011), pp. 1325-1342
6. H. Karapolat, S. Eyigor, M. Zoghi, Y. Akkoc, Y. Kirazli, G. Keser Are swimming or aerobic exercise better than conventional exercise in ankylosing spondylitis patients? A randomized controlled study Eur J Phys Rehabil Med, 45 (2009), pp. 449-457
7. L. Altan, N. Korkmaz, M. Dizdar, M. Yurtkuran Effect of Pilates training on people with ankylosing spondylitis Rheumatol Int, 32 (2012), pp. 2093-2099
8. A. Cagliyan, N. Kotevoglou, T. Onal, B. Tekkus, B. Kuran Does group exercise program add anything more to patients with ankylosing spondylitis? J Back Musculoskelet Rehabil, 20 (2007), pp. 79-85
9. Altan *et al.*, (2006), *The effect of balneotherapy on patients with ankylosing spondylitis*, Scandinavian Journal of Rheumatology. Vol 35 (4), pages 283-9
10. van Tubergen A, Landewe R, van der Heijde D, Hidding A, Wolter N, Asscher M, *et al.* Combined spa-exercise therapy is effective in patients with ankylosing spondylitis: a randomized controlled trial. *Arthritis Rheum* 2001;45:430–8.