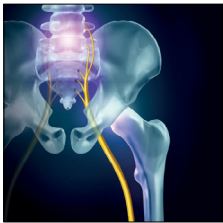




## Improving the management of sciatica



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Sciatica is a condition involving considerable pain and disability. It is characterised by radiating pain in one leg with or without associated neurological deficits at physical examination.<sup>1</sup> Most patients with sciatic symptoms receive conservative (non-surgical) care in a primary care setting, although patients with signs and symptoms indicative of possible cauda equina syndrome need urgent referral. A minority of patients (ie, those with persisting symptoms despite conservative care) are considered for spinal (disc) surgery.<sup>1</sup>

Management of sciatica can be suboptimal and shows large variation in clinical practice. In general, we only have limited knowledge about the diagnosis of sciatica, the value of diagnostic interventions, the natural and clinical course of disease, predictors of outcome, and the efficacy of most therapeutic interventions. Compared to the amount of research on non-specific low back pain, research activities focused on sciatica are scarce.

In their well designed randomised controlled trial, Kika Konstantinou and colleagues evaluated the efficacy and cost-effectiveness of a stratified care approach versus usual care in 476 patients presenting with sciatica in primary care.<sup>2</sup> Patients randomly allocated to stratified care were divided into three groups: patients in group 1 had the lowest risk and were offered brief advice and up to two physiotherapy sessions, patients in group 2 (medium risk) were offered up to six physiotherapy sessions, and patients in group 3 (highest risk) were fast-tracked to MRI and spinal specialist assessment within 4 weeks of randomisation. Based on previous research evaluating stratified care for patients with non-specific low back pain, expectations for this trial were high.<sup>3</sup> It was hypothesised that a more individualised treatment approach, based on a prognostic classification using the StarT Back Tool and with clinical indicators of referral to spinal specialists, would result in better outcomes compared to a one-size-fits-all usual care approach. Unfortunately, this was not the case. No significant differences were found in time to recovery, which was the primary outcome. Secondary outcomes, including physical function, global perceived change, back pain, leg pain, and general health also showed no significant between-group differences at 4 months and 12 months of follow-up. The stratified care approach was not cost-effective compared to usual care.<sup>2</sup>

The authors of the SCOPiC trial are to be applauded for their initiative. These results might be disappointing at first glance, but at the same time they indicate that we have to do a much better job in identifying the prognostic indicators of outcomes and the effect-modifiers of existing and new treatment approaches for people with sciatica. In order to obtain these insights, we first have to do large cohort studies evaluating the potential prognostic indicators from a broad biopsychosocial perspective in well defined study populations. A well known problem in the field of sciatica is the use of many synonyms and a wide variation in classification and diagnostic criteria.<sup>4</sup> Until there is greater consensus in the literature, we should at least be very clear about the description of the criteria used in each study.

In the SCOPiC study, the median time to recovery was 10 weeks (95% CI 6.4–13.6) in the stratified care group and 12 weeks (9.4–14.6) in the usual care group. For a person who is in pain and suffering from disability, this might be considered a long period of time. At the same time, the results of the SCOPiC study show that the vast majority of people recovered within a couple of months. Also notable is the relatively low number of patients (13 of 476) who received spinal surgery. All of this information is important to share with future patients.<sup>2</sup> Another interesting finding in the SCOPiC trial was the result in the subgroup of patients with spinal stenosis, in whom the stratified care approach showed better results compared with usual care. Although, these findings are based on a subgroup analysis and thus could be a chance finding only, future studies might well further evaluate similar interventions in this subgroup of patients.<sup>2</sup>

The content of current guidelines for management of sciatica will not directly change on the basis of the results of the SCOPiC trial. Indeed, the information about clinical outcomes, irrespective of the randomised treatment allocation, further strengthens recommendations for conservative care before spinal surgery is considered.<sup>1,5</sup> There is increasing evidence about the minimal effect of commonly prescribed pain medications, including combination drug therapy, for patients with sciatica.<sup>6–8</sup> More emphasis should be put on reassurance (once indications for a specific pathology such as a Cauda syndrome have been excluded), the relatively favourable prognosis for most patients, and the advice to stay active.<sup>2,5</sup> In the

future, once we have more information about prognostic indicators and effect modifiers, we will be better able to individualise treatment.

I declare no competing interests.

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- 1 Jensen RK, Kongsted A, Kjaer P, Koes B. Diagnosis and treatment of sciatica. *BMJ* 2019; **367**: 16273.
- 2 Konstantinou K, Lewis M, Dunn KM, et al. Stratified care versus usual care for management of patients presenting with sciatica in primary care (SCOPiC): a randomised controlled trial. *Lancet Rheumatol* 2020; **2**: e401–11.
- 3 Hill JC, Whitehurst DG, Lewis M, et al. Comparison of stratified primary care management for low back pain with current best practice (STarT Back): a randomised controlled trial. *Lancet* 2011; **378**: 1560–71.
- 4 Lin CW, Verwoerd AJ, Maher CG, Verhagen AP, Pinto RZ, Luijsterburg PA, Hancock MJ. How is radiating leg pain defined in randomized controlled trials of conservative treatments in primary care? A systematic review. *Eur J Pain* 2014; **18**: 455–64.
- 5 Ostelo RW. Physiotherapy management of sciatica. *J Physiother* 2020; **2**: 83–88.
- 6 Oliveira CB, Maher CG, Ferreira ML, Hancock MJ, Oliveira VC, McLachlan AJ, Koes BW, Ferreira PH, Cohen SP, Pinto RZ. Epidural corticosteroid injections for lumbosacral radicular pain. *Cochrane Database Syst Rev* 2020; **4**: CD013577.
- 7 Pinto RZ, Verwoerd AJH, Koes BW. Which pain medications are effective for sciatica (radicular leg pain)? *BMJ* 2017; **359**: j4248.
- 8 Mathieson S, Kasch R, Maher CG, Pinto RZ, McLachlan AJ, Koes BW, Lin CC. Combination drug therapy for the management of low back pain and sciatica: systematic review and meta-analysis. *J Pain* 2019; **20**: 1–15.

## The value of antinuclear antibody testing and retesting

As a laboratory finding, antinuclear antibodies (ANAs) have provided an important focus to establish the scientific foundation of rheumatology and underpin research on autoimmunity. As a laboratory test, however, ANAs have provided uncertain and often confusing information that can drive unnecessary costs, as shown in a provocative paper by Ai Li Yeo and colleagues<sup>1</sup> in *Lancet Rheumatology*. The discordancy between the scientific value of the ANA test and its real-world utility is striking given that ANA testing has been a routine part of patient evaluation for more than 50 years and has witnessed many important technological improvements.<sup>2</sup>

The study by Yeo and colleagues<sup>1</sup> provides an important perspective on serological testing by analysing ANA results from a tertiary health network. The sample size was huge, with 36 715 tests included from 28 840 patients. 7875 (21.4%) of these tests were repeats. Although the reasons for the repeat tests were not specified, only 511 (19.0%) of the 2683 patients with a negative initial test showed a transition from negative to positive. The change in serological status led to a new diagnosis in only five (1.1%) of the 451 patients with no diagnosis before the repeat ANA test. This frequency translates into a positive predictive value of 1.1%, which is very low indeed.

Although estimates for costs always involve assumptions and guess work, the authors calculate a cost of nearly US\$150 00 for repeat testing. Actual billings in the USA would probably be much higher. Reducing health-care

expenditures is always important, but determining the basis of excess spending can be difficult. In the case of ANA testing in Yeo and colleagues' study, it is possible that not only was repeat testing shown to be unnecessary, but also that initial testing was unnecessary.

As is well documented in many studies, the major problem of the ANA test is the high frequency of positive results in otherwise healthy individuals;<sup>3</sup> this number can approach 20% or more. Among assay platforms, the indirect immunofluorescence assay, although often considered the gold standard, has a high rate of false positivity. The indirect immunofluorescence assay involves assessment of antibodies binding to antigenic determinants in a cell nucleus; values are reported in terms of a titre or dilution of sera producing positive staining and the pattern of staining (eg, homogenous, speckled).<sup>2</sup>

In the study by Yeo and colleagues, a positive titre was considered 1:160, whereas in the new European League Against Rheumatism/American College of Rheumatology criteria, classification requires a positive test at a titer of 1:80;<sup>4,5</sup> a solid phase assay with equivalent performance is also acceptable. The use of a 1:80 titre probably would not alter the main conclusions of the study, although the percentage of positive results would be higher.

For unknown reasons, otherwise healthy individuals, especially women, frequently show positivity in the indirect immunofluorescence assay, sometimes with high titres. Although some studies suggest differences in the staining patterns between healthy individuals and those



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