

#### Background:

A research gap exists for optimal management of cervical radiculopathy (CR) in the first 12 weeks (Kjaer et al, 2017) and people with CR present to primary carers seeking diagnosis, reassurance and treatment for a condition thought to have a favourable natural history of recovery over weeks and months (Wong et al, 2014; Alentado et al, 2014). Purpose: The primary aim of this assessor blinded, multicentre randomised controlled trial was to investigate the effects of a 4 week (8 sessions) physiotherapy programme of advice, manual therapy, exercise and neural unloading tape, compared to weekly phone advice; on disability and pain.

#### Methods:

Participants with less than 12 weeks of symptoms, meeting a clinical prediction rule for CR diagnosis; were recruited from primary care or self-referral and randomly allocated to receive treatment or phone advice. Treatment was provided by experienced physiotherapists in primary and secondary care. Follow up was at 4 (primary endpoint), 12 and 24 weeks. This trial is registered at ClinicalTrials.gov (NCT02449200) and the protocol has been published (Keating et al, 2019).

#### Results:

29 participants were randomised to each group. Mean (SD) age was 49(12) years & and symptom duration was 4(5) weeks. Using intention to treat analysis, linear regression was used to calculate effect sizes for primary outcomes, for baseline differences. Between group mean differences at 4 weeks were -1.1 (95% CI -2.2 to -0.04, p 0.04) for neck pain and -0.7 (95% CI -1.8 to 0.5, p 0.26) for arm pain. Fig 1 illustrates arm pain (mean & SE) stratified by group. Common language effect size for NDI was 0.4 (95% CI 0.4 to 0.5, p 0.35) and 0.69 (95% CI 0.5 to 0.7, p 0.02) for Global Rating of Change (GROC). At 12 weeks, there were no significant between group differences for any primary outcomes.

#### Conclusion:

At 4 weeks, pain and disability improved within both groups and although neck pain was statistically significantly better in the treatment group, this did not reach clinical significance. Probability of meaningful clinical improvement based on GROC was 70% with treatment versus 30% with advice. Implications: Advice on natural history and activity is adequate for people with recent onset CR, but attending a short course of physiotherapy increases probability of improvement at 4 weeks.

