

Oral Steroids for Acute Radiculopathy Due to a Herniated Lumbar Disk

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Reference: Goldberg, Harley et al. "Oral Steroids for Acute Radiculopathy Due to a Herniated Lumbar Disk." *Journal of the American Medical Association* 313.19 (2016): 1915-1923. Web. 29 July. 2016

Objective: To determine if PO prednisone is more effective than placebo in improving pain and function for patients with sciatica

Methods: Randomized, double blind, placebo-controlled trial from 2008-2013 in a large health care system in Northern California. Eligible participants were 269 adults who had radicular pain for 3 months or less, had Oswestry Disability Index (ODI) score of 30 or higher (scores ranged 0-100 with higher scores equating to greater dysfunction), and had a herniated disk confirmed by MRI.

Note: Oswestry Disability Index is derived from a questionnaire that assesses disability from low back pain that was first published in 1980. It is a self-completed questionnaire and has 10 topics each with 6 statements regarding intensity of pain, lifting, ability to care for oneself, ability to walk, ability to sit, sexual function, ability to stand, social life, sleep quality, and ability to travel. Scoring is as follows: 0-20 minimal, 21-40 moderate, 41-60 severe, 61-80 crippling back pain, 81-100 bed-bound or exaggeration.

Interventions: patients randomly assigned to receive a tapering 15 day course of PO prednisone (5 days each of 60 mg, 40 mg, 20 mg) or placebo

Results: primary outcome was ODI change at 3 weeks. Secondary outcomes were ODI change at 1 year, change in lower extremity pain, spine surgery, and Short Form 36 Health Survey (SF-36) Physical Component Summary (PCS) and Mental Component Summary (MCS) scores (0-100 scale; higher scores better).

Prednisone group had baseline mean ODI score of 51.2 and 3 week mean ODI score of 32.2. Placebo group had baseline mean ODI score of 51.1 and mean 3 week ODI score of 37.5. Prednisone group had adjusted mean 6.4 points greater improvement in ODI scores at 3 weeks than the placebo group and mean 7.4 point greater improvement at 52 weeks. The prednisone group had an adjusted mean 0.3 point reduction in pain at 3 weeks and mean 0.6 point reduction at 52 weeks. There were no differences in surgery rates at 52 week follow up. Having 1 or more adverse events at 3 week follow up was more common in the prednisone group than placebo group (49.2% vs 23.9%, $P < .001$). Adverse events were mostly minor side effects of prednisone, e.g. insomnia, nervousness, increased appetite. There were 5 serious adverse events over the 52 week follow up period with 3 in the prednisone group (appendectomy, suicide attempt, DVT), and 2 in the placebo group (upper GI bleed, partial nephrectomy for RCC). None of these were attributed to the study medication).

Conclusion: For patients with acute radiculopathy from a herniated lumbar disk, a short course of oral steroids, compared with placebo, resulted in modestly improved function and no improvement in pain.