

Haimovic IC, Beresford HR. Dexamethasone is not superior to placebo for treating lumbosacral radicular pain. Neurology 1986;36:1593-4.

Design. Randomized clinical trial

Population/sample size/setting:

- 33 patients (age and sex not specified) admitted to hospital with at least one qualifying symptom and one qualifying sign of lumbosacral radicular pain at the Cornell University Neurology Service
- Symptom criteria were severe, resting low back pain; pain localized to a single dermatome; radicular pain aggravated by cough/defecation; nocturnal back pain relieved by standing
- Qualifying signs were motor/sensory/reflex signs in a nerve root or straight leg raising (SLR) at 30° or less
- Exclusion criteria not specified, but no patient had neoplastic disease or other known cause other than degenerative disc disease
- 21 randomized to 7 days tapering dexamethasone, 12 to placebo
- All patients kept at bed rest for 7 days, with other analgesics allowed prn

Main outcome measures:

- Evaluations at baseline, after 7 days, 1 year, and 4 years
- 7 point pain scale, neurologic exam, and days lost from work noted each visit
- “Early improvement” scored as present if patient reported that pain “definitely less” at 7 days than before treatment
- “Late improvement” was scored as present if pain score at 1 year was 3 or less on scale of 0 to 6; “sustained improvement” if same pain score after 4 years
- 14/21 dexamethasone subjects had myelogram, with 7 positive; 6/12 placebo subjects had myelogram, with 5 positive
- Early improvement present in 7/21 dexamethasone subjects and 4/12 placebo; late improvement in 6/21 dexamethasone subjects and 4/12 placebo; sustained improvement in 8/16 dexamethasone and 7/11 placebo subjects—no differences in response
- Among pts with pos SLR, 8/19 on dex and 1/6 on placebo had early improvement; this not significant by chi-square [or Fisher’s exact test—EW]

Authors’ conclusions:

- Dexamethasone not superior to placebo in lumbosacral radicular pain
- Effect of dexamethasone may have been obscured by absence of extruded discs in many subjects, by co-administration of analgesics, and by low power

Comments:

- Putting both groups at bed rest for 7 days may also obscure effect of treatment, especially if dexamethasone made early mobilization easier
- Dichotomizing responses into yes-no categories also erodes power by discarding information from 7 point pain scale

- No mention of days of work lost, amount of analgesic use, or neurologic exams; done but not reported
- Duration of symptoms prior to treatment is not mentioned; since duration of symptoms is considered an important factor in treatment response, this omission precludes a clear interpretation of the results
- The study was done before MRI became available and myelography was done on only 14 patients, 7 of whom had extruded discs; many of the patients may not have had disc herniations as pain generators

Assessment: Inadequate for evidence for or against the effectiveness of dexamethasone for radicular pain (sparse description of patient population, especially for duration of symptoms, outcome scales obsolete and not translatable into current usage)