Healing the Heel: Corticosteroid shots for plantar fasciitis

Clinical Question: Are corticosteroid injections effective for plantar fasciitis?

Bottom-line: Small, randomized controlled trials (RCTs) demonstrate that corticosteroid injections significantly reduce plantar fasciitis pain for 1 in 3 people at four weeks. Benefit beyond 12 weeks has not been well demonstrated. Risk of rupture is likely less than what has been reported in observational studies.

Evidence:
- Two double-blind, RCTs:
  - 65 patients, randomized to ultrasound guided corticosteroid (20 mg methylprednisolone acetate), palpation guided corticosteroid, or ultrasound guided placebo:
    - Significant mean improvement in pain score on 100 point Visual Analogue Scale (VAS) for both steroid groups at six and 12 weeks, respectively:
      - Ultrasound guided steroid: 28.9, 33.6.
      - Unguided steroid: 35.2, 37.3.
      - Improvement with Placebo: 5.1, 2.2.
    - Minimal clinically important difference (MCID) for VAS ~12.
    - Limitations: Small size, follow up only 12 weeks.
    - No adverse events (i.e. rupture) reported.
  - 82 patients, randomized to ultrasound guided corticosteroid (4 mg dexamethasone sodium phosphate) versus placebo:
    - Significant mean improvement in pain on 100 point questionnaire at four weeks:
      - Corticosteroid: 22.1 points.
      - Placebo: 11.7 points.
      - MCID for questionnaire=13 points.
    - Number Needed to Treat (NNT) for one successful outcome for pain=3.
• Trend towards improvement at eight and 12 weeks (corticosteroids better by 5.6 and 5.3 points on 100 point scale respectively) but not statistically significant.
• No adverse events (i.e. rupture) reported.

Context:
• Plantar fasciitis is a self-limiting condition and will generally resolve within one year regardless of treatment.\(^5\)
• Concerns regarding plantar fascia rupture with corticosteroid injections are frequently cited\(^6\) with estimates ranging from 2.4\(^%\)\(^7\) to 10\(^%\).\(^8\) These estimates are observational rates of patients referred to specialty care centers and not necessarily reflective of primary care.
• A systematic review of five RCTs (149 patients) comparing ultrasound versus palpation guided corticosteroid injection for plantar fasciitis reported no difference in VAS scores [Standard Mean Difference = -0.35, 95\(^%\)CI (-0.83, 0.14)].\(^9\) No incidence of rupture was reported for the 149 patients receiving injection.

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Authors do not have any conflicts to disclose.

References:

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