Crowther MAA, Bannister GC et al. A prospective, randomised study to compare extracorporeal shock-wave therapy [ESWT] and injection of steroid for the treatment of tennis elbow. JBJS Br 2002;84(5) 678-679.

Design: Randomized clinical trial

Brief summary of results:

- 93 patients entered a randomized trial comparing ESWT (n=51) to steroid injection (n=42), but only 25 patients randomized to injection accepted the treatment
- Eligibility criteria were age over 18 with 4 months of clinically defined tennis elbow and no surgical intervention or injection in the past year
- Exclusion criteria included dysfunction of shoulder, neck or thorax, arthritis, neurological abnormality, nerve entrapment, coagulation abnormality, pregnancy, infection, or tumor
- Injection group (n=25, 13 men, 12 women, mean age 49) received one injection of 20 mg triamcinolone with 1% lidocaine
- ESWT (n=48, 25 men, 23 women, mean age 49) group received 3 sessions of ESWT at weekly intervals using 2000 shock waves (maximum 0.1 mJ/mm^2) with ultrasound guidance but no local anesthesia
- Both groups were advised to rest and avoid aggravating activities
- Pain VAS on a scale of 0-100 was the main outcome measure
- For the injection group, pain VAS at baseline, 6 weeks, and 12 weeks were 61, 21, and 12
- For the ESWT group, pain VAS at baseline, 6 weeks, and 12 weeks were 61, 35, and 31
- 84% of the injection group had a 50% reduction in pain at 12 weeks; 60% of the ESWT group had 50% reduction in pain at 12 weeks
- At the end of 3 months, 10 ESWT patients were referred for surgery, but only 2 of the injection patients were referred for surgery

Authors' conclusions:

- Injection of steroid and local anesthetic is more effective than ESWT in treating tennis elbow, although both interventions do relieve symptoms
- ESWT may have a place in the management of tennis elbow, but its role must be better defined
- Steroid injection costs £3, compared to £300 for ESWT; this must be taken into account in planning treatment

Comments:

- Of 42 patients referred for injection, 25 refused the treatment; this large dropout is not explained, and is much larger than the 3 patients who refused ESWT
- No functional outcomes (grip strength, daily activity scale) is reported

Assessment: Inadequate for evidence statement (large unexplained dropout in one treatment group). Consensus in favor of injection as first line treatment is reasonable.