Gobelet C, Waldburger M, Meier JL. The effect of adding calcitonin to physical treatment on reflex sympathetic dystrophy. Pain 1992;48:171-175.

Reviewed, no change to conclusions, February 2017

Design: Randomized clinical trial

Brief summary of results:

- 66 patients (42 men, 24 women, mean age 50) with post-traumatic CRPS of the wrist or ankle were treated at a university physical medicine department in Lausanne, Switzerland
- Selection criteria appear to have been based on clinical (pain, vasomotor instability, swelling) and imaging (x-ray patchy demineralization *or* positive bone scan if the x-ray were normal)
- Exclusion was based on any abnormal laboratory finding (RBC, sed rate, plasma calcium, alkaline phosphatase)
- All patients received daily active and passive physical therapy within the pain-free range of movement for 3 weeks, followed by PT 3 times per week until week 8 of the study
- Patients were randomly assigned to 100 units of intranasal salmon calcitonin (n=33) or placebo (n=33), administered by nasal spray 3 times per day for 3 weeks
- Pain at rest, pain with movement, and range of movement improved in both groups with physical therapy
- The calcitonin group improved significantly more than the placebo group at weeks 3 and 8 on pain at rest, pain with movement, and range of movement
- Ability to work was reported at week 8
- Of the 34 patients with wrist CRPS, 13 of 16 calcitonin patients and 9 of 18 placebo patients were working, which was a "significant" advantage for calcitonin ($p<0.03$)
- For the 32 patients with ankle CRPS, 8 of 17 calcitonin patients and 6 of 15 placebo patients were working ($p=0.35$)
- Adverse effects were mild to moderate and did not require discontinuation of treatment

Authors' conclusions:

- Physical therapy is an effective treatment for CRPS
- Calcitonin by intranasal spray is beneficial to patients with CRPS
- This benefit is likely to be from an analgesic effect of calcitonin; at the doses administered, its anti-osteoclastic action is not sufficient to be effective

Comments:

- Selection criteria, method of randomization, baseline values of treatment groups are insufficiently reported to rule out bias
- The "significant" advantage of calcitonin in work status for the wrist CRPS patients was incorrectly calculated; Fisher's exact test has $p=0.08$, not 0.03

Assessment: Inadequate for evidence about the effectiveness of calcitonin for CRPS