

Sahin F, Yilmaz F, et al. Efficacy of salmon calcitonin in complex regional pain syndrome (type 1) in addition to physical therapy. Clin Rheumatol 2006;25:143-148.

Reviewed, no change to conclusions, February 2017

Design: randomized clinical trial

Brief summary of results:

- 35 patients (10 men, 25 women, mean age 59) with early stage CRPS after upper extremity trauma were treated at a physical medicine department at a research hospital in Istanbul, Turkey
- Patients were accepted as early CRPS-I if they had pain, edema, hyperhidrosis, redness, and warmth in the affected extremity
- Patients were not accepted as early CRPS-I if they had skin atrophy, cyanosis, coldness, or articular stiffness
- Other exclusion criteria were previous treatment with calcitonin or other antiresorptive drugs, cerebrovascular disease, seizure disorders, pulmonary TB, and peripheral neuropathy
- Randomization was done by one author and assessment by a different author
- Patients were randomized to 200 U nasal salmon calcitonin plus 500 mg/d of calcium (n=18) or acetaminophen 1500 mg/d
- All patients received hand, wrist, and shoulder range of motion and exercise training; contrast bathing was taught to patients for use at home
- Additional physical therapy was stellate ganglion blockage with ultrasound (at the attachment of the sternocleidomastoid muscle to the clavicle), and TENS to the affected hand for 20 minutes per session; there were 5 sessions per week for 3 weeks
- Follow-up assessment was done at 2 months for several outcomes: allodynia, hyperalgesia, and trophic changes, pain VAS, wrist dorsiflexion and palmar flexion, and distance between the fingertip and distal palmar crease
- At the 2 month examination, neither group had changed with respect to allodynia, hyperalgesia, or trophic changes
- At the same 2 month examination, both groups registered improvements for pain VAS, dorsiflexion, palmar flexion, and fingertip-palmar crease distance
- The two groups did not differ from one another on any outcome at 2 months
- No side effects were observed in either group

Authors' conclusions:

- CRPS-I benefits from physical therapy in the form of contrast baths, TENS, and stellate ganglion blockage with ultrasound
- Calcitonin confers no additional benefit to PT

Comments:

- The method of randomization is not stated and cannot be assumed to be unbiased

- No sample size method is stated; the study may have been too small to detect a difference between groups; because within-group comparisons require smaller samples than between-group comparisons, the within-group changes are likely to be valid
- It is not clear whether the dorsiflexion, palmar flexion, and fingertip-palmar crease measurements were done with active or passive range of motion

Assessment: Inadequate for evidence against calcitonin (low power, unclear randomization), but compatible with a lack of evidence supporting calcitonin for CRPS