

1987 ACADEMY/CONGRESS ABSTRACTS

PALERMO, F.X. (Gaylord Hospital, Wallingford, CT); **Patterned Electric Stimulation vs. Unrelenting Stump Pain in Amputations.**

Amputees' severe pain of sympathetic dystrophy nature has presented a management challenge to practitioners for many years. Current study includes four patients with severe unrelenting stump pain - 2 B/K and 2 A/K amputees - average time since amputation ten years and pain persists since amputation. Symptoms include stump hypersensitivity, skin color changes, stump diaphoresis, volume changes (three underwent sympathectomy), and all with pain interfering with wearing prosthesis, walking and sleep. Previous attempts at therapy, including socket modifications, TENS, local and p.o. steroids, quinine and muscle relaxants, were without positive effect. All underwent stimulation patterned after normal reciprocal lower extremity motions of agonist and antagonistic muscles included in the stump (gastroc and anterior tib in B/K, and quads and hams in A/Ks). All underwent 12 sessions of stimulation, one-half each, two days per week. All tolerated stimulation levels producing minimum twitch. After an average of 5 sessions patients began to increase their prosthesis wearing from an average of one-half hour progressing to 2½ hours. Walking distance increased dramatically, diaphoresis stopped, skin color returned to normal, hypersensitivity was reduced. Medications were reduced and patients slept with minimum discomfort. After six months stump sock requirements more than doubled. Weaning from stimulator is slow, two patients tolerated two weeks and the other 3-4 weeks before requiring repeat stimulation. Patterned stimulation is appropriate for unrelenting stump pain, simple to use, well tolerated and effective.