Central Stimulation in the Treatment of Pain

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Abstract

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In April, 1972, the authors first reported the use of chronic thalamic stimulation for the control of facial anesthesia dolorosa. This incapacitating pain syndrome had previously been refractory to definitive treatment. Chronic thalamic stimulation was undertaken following observation that acute stimulation in the sensory relay nuclei of the thalamus produced a tingling sensation which replaced pain in several patients who were undergoing thalamotomy for the treatment of other types of pain. This experience encouraged us to attempt to utilize chronic thalamic stimulation in the treatment of constant tenacious incapacitating anesthesia dolorosa. Three successfully treated patients were reported. Subsequently this concept has been extended to treat ‘thalamic’ pain syndromes and other types of painful states of central origin by chronic stimulation in either the main thalamic sensory nuclei or the posterior limb of the internal capsule. Cases will be reported, the techniques discussed and the theoretical basis for successful pain relief by such central stimulation discussed.