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Subcutaneous Neurostimulation for Intractable C2 Mediated Headaches

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The technique of subcutaneous neurostimulation for intractable occipital headaches was developed and perfected over the past 7 years in our clinic for selected patients refractory to other medical and surgical treatment modalities. The technique involves placement of a single or dual multipolar wire electrode array via a percutaneous approach into the subcutaneous space, transversely, at, or near, the level of C1. At relatively low voltages (1 to 3 volts) most patients perceive an agreeable paresthesia pattern in the distribution of the greater and/or lesser occipital nerves which effectively blocks C2 mediated headaches which may be either paroxysmal or chronic in nature. The long term success rate on 13 patients with an average 4 year followup is approximately 80% good to excellent results with at least 50% pain relief.
We now have mean 2 year followup data on 62 patients undergoing 65 implants with similar outcomes of 80% success in controlling intractable occipital headaches. Subcutaneous electrical stimulation is a new application of existing neuromodulation equipment and techniques which may have many indications for control of intractable pain syndromes in both dermatomal and myotomal sensory distributions.

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