



National Refractory Angina Centre
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Response to appraisal consultation document on spinal cord stimulation

Chronic refractory angina is a clinical diagnosis. It is a term that has been used to describe patients who continue to experience episodes of stable angina, despite optimal medical therapy, and in whom revascularisation is unfeasible.

Interventional revascularisation procedures only provide prognostic benefit if proximal vessel disease is present. Procedures performed for non-proximal vessel disease are for symptom control. The diagnosis of chronic refractory, properly understood, also includes patients in whom palliative revascularisation may be technically feasible, but whom the risk of procedural complications may outweigh the potential benefits.

Thus, refractory angina patients include those whose conditions are refractory to conventional medical management for one or more of the following reasons:

- The patient chooses not to undergo further coronary intervention
- PCI or CABG are not technically feasible
- The patient has undergone previous coronary intervention and further intervention carries unjustifiable risks
- Co-morbidity precludes further coronary interventions

At the National Refractory Angina Centre, we have developed together with patients an award winning approach to the management of chronic refractory angina. Our treatment algorithm developed in conjunction with patients is now included in the Cheshire and Merseyside Cardiac Network guidelines on the diagnosis and management of stable angina.

Spinal cord stimulation appears in the treatment pathway following extensive assessment by a multidisciplinary team; further strategies include education on the condition and pain management strategies. We have been implanting spinal cord stimulators for over ten years for the management of refractory angina. It continues to be an effective treatment in a group of patients who continue to have poor control of their symptoms, despite cognitive reframing of their condition, optimal medical therapy and other pain management strategies.

Spinal cord stimulation is an effective therapy that has reduced pharmacological costs and the number of hospital re-admissions. Pharmacological cost can be significant in the treatment of chronic refractory angina. Opiate costs alone can reach £30,000 per annum per patient.

Spinal cord stimulation should remain an available option for patients with chronic refractory angina as defined above.

At the National Refractory Angina Centre we see a subgroup of refractory angina patients with neuropathic chest wall pain following coronary artery bypass graft procedures. The neuropathic chest wall pain arises from injury to intercostal nerves during harvesting of the internal mammary artery. This can be refractory to medical therapy. Spinal cord stimulation in combination with a multidisciplinary approach is an effective treatment in patients refractory to conventional medical management.