

Cardiology-2020: The evaluation of clinical efficacy with radiofrequency ablation of thoracic sympathetic nerve in the treatment of heart failure - Min Luo - China-Japan Union Hospital of Jilin University, China

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Abstract

Despite the widespread use of pharmacologic therapy and devices, the overall prognosis of heart failure patients remains poor and new therapies are needed. Release the sympathetic hyperexcitability due to thoracic sympathetic nerve irritation by thoracic pathology (e.g. herniated disc, hypertrophic ligamentum flavum) by radiofrequency ablation may be significantly useful for the treatment of heart failure. In our study, 120 patients with heart failure were divided into two groups with Experimental group receiving radiofrequency ablation of the appropriate thoracic spine lesion and the associated thoracic sympathetic nerve and Control group receiving the usual cardiac medication. Clinical efficacy were evaluated by N terminal pro B type natriuretic peptide (NT-proBNP), Echocardiogram Ejection Fraction (EF%), Electrocardiogram (ECG) and Six-minute walk distance test before and after treatment. At five year follow up, after treatment, the clinical symptom, quality of life, quality of sleep and the activity of the patients in both groups were significantly improved, but the improvement in NT-proBNP, EF% and Six-minute walk distance were significantly better in Experimental group than Control group. Moreover, the five-year survival rate of Experimental group is 78.3% and that in Control group is only 38.3%. We suspect that hyperactivity of thoracic cardiac sympathetic nerve might be an important cause of heart failure. We postulate that the denervating effect by radiofrequency ablation would be similar to that of implantation of thoracic spinal stimulator ,but at a much lower cost and easier to perform without much postoperative care or complication. Last but not least, we have found a new primary mechanism of heart failure by our further research.

Biography

Min Luo is the Director of Pain Department, China-Japan Union Hospital of Jilin University, President of Jilin Province Branch of Chinese Pain Physician Association. He has studied the etiology and treatment for chiropractic heart disease for many years. He has established a new model of neurological regulation and treatment of cerebral infarction and has achieved satisfactory clinical effect.