Short- and Mid-Term Outcome of Combined Ganglionated Plexi (GP) Ablation and Radial Procedure for the Treatment of Atrial Fibrillation

Shun-ichiro Sakamoto, Takashi Nitta, Hiroya Ohmori, Masahiro Fujii, Motoko Tanoue, Kenichiro Takahashi, Masami Ochi, Kazuo Shimizu

Division of Cardiovascular Surgery, Surgery II, Nippon Medical School, Tokyo, Japan

We performed GP ablation combined with a radial procedure for the treatment of AF in 14 patients. A total of 35 sites at 5 anatomical GP areas were stimulated to identify active GP with marked vagal reflex during high frequency stimulation. The active GPs were ablated randomly one by one using sequential pacing and an ablation technique. Postoperative heart rate variability and surgical outcome at short- and mid-term follow-up was then examined. An average of 4.3 ± 2.0 active GPs were identified in each patient. Atrial fibrillation recurred in 7 patients (50%) 10 days postoperatively. Heart rate variability showed that high-frequency spectral component was significantly smaller in the patients who retained in sinus rhythm compared to patients with recurring AF (20.6 ± 12.7 vs 148.2 ± 124.9 p<0.05). Thirteen patients (92%) restored sinus rhythm at discharge and maintained in sinus rhythm without recurrence of AF at a mean follow-up of 7.4 ± 4.7 months. GP ablation combined with a radial procedure resulted in a satisfactory outcome at short- and mid-term follow-up.

Keywords: atrial fibrillation, GP, surgery