Incidence and Management for Trouble-Shooting Associated with the Sprint-Fidelis ICD Lead

Kenichi Iijima1, Masaomi Chinushi1, Akinori Sato1, Yukio Hosaka1,3, Daisuke Izumi1, Hiroshi Furushima1, Hiroshi Watanabe1, Masahito Sato3, Katsuya Ebe1, Hiroshi Shimizu1, Kazuyoshi Takahashi2, Yoshifusa Aizawa1

1The First Department of Internal Medicine, Niigata University School of Medicine, Japan, 2Tachikawa Medical Center, 3Niigata City General Hospital

Method: We investigated the outcomes of 136 patients with Sprint-Fidelis in 5 centers in Niigata Prefecture. Results. Incidence: Lead troubles occurred in 9 patients (6.6%). The mean period before the trouble was 31 months (16-57 months). Implantation: Among these 9 patients, the lead was implanted using a cut-down technique in 4, an extra-thoracic approach in 4 and a subclavian approach in 1. Discovery: The lead troubles in 5 were discovered at regular clinics. The other 4 patients emergently visited because of the lead integrity alert (LIA) or inappropriate ICD discharges. In the 9 patients, the average sensing integrity counter was 338/day and mean F-F interval, of which was recognized as NST, was less than 200ms. The LIA: The LIA had been programmed in 7, and 5 of the patients visited before inappropriate ICD discharges. However, the other 2 elderly patients couldn’t notice the alert sound. Extraction: Lead extraction was attempted in 6 and 5 leads were removable without any complications. Conclusions: The incidence of troubles with Sprint-Fidelis is high, and it occurs in the relatively late phase. The LIA is useful to detect the lead problems but its efficacy may be limited in elderly patients.

Keywords: lead trouble, ICD