Is There Seasonal Variation in the Incidence of Atrial Fibrillation?

L. Davis1,∗, L. Coverdale2, M. Johnston2, N. Prentice2
1 Westmead Hospital, Westmead, Australia
2 Biotronik, Germany

Cardiovascular events seem to follow a diurnal and seasonal pattern. The incidence of stroke based on hospital casualty presentations is also seasonal. To determine whether atrial fibrillation also follows a seasonal pattern we analysed the remote monitoring data of 53 of our patients with dual chamber pacemakers. Daily transmission data were examined for mode switching, AF burden, activity sensor rate and % V pacing between October 2017 to October 2018.

The frequency of atrial fibrillation varied in our patient cohort throughout the year with a peak in the August, September and October months. This is similar to the peak in the flu season of August September. The ventricular pacing percentage and activity sensor followed a stable pattern in the flu season of August-September and October months. This is similar to the peak in the flu season of August-September. The ventricular pacing percentage and activity sensor followed a stable pattern throughout the year.

Conclusion: Our data suggest that atrial fibrillation is more likely to occur in the late winter/early spring period perhaps throughout the year.

Further work needs to be performed to explore this.

Conclusion: HBP has a high success rate and is feasible in an Australian setting with improvements in procedural performance and outcomes seen with operator experience. AV block appears to affect procedural success.

http://dx.doi.org/10.1016/j.hlc.2019.06.197


S. Virk1,∗, S. Kumar1,2
1 Westmead Hospital, Sydney, Australia
2 Westmead Applied Research Centre, University of Sydney, Australia

Background: Catheter ablation of atrial fibrillation (AF) is a technically challenging procedure with sub-optimal success rates. In recent years, remote magnetic navigation (RMN) technologies have emerged in an effort to facilitate safer, more durable lesion formation during AF ablation. However, the impact of RMN on safety and efficacy of AF ablation is unclear.

Methods: Electronic databases were searched for controlled studies comparing outcomes of AF ablation performed using RMN versus manual catheter navigation (MCN). The primary efficacy endpoint was freedom from AF at ≥1 year follow-up. The primary safety endpoint was major peri-procedural complications. Secondary endpoint included fluoroscopy and procedure durations.

Results: Fifteen observational studies were included, involving a total of 3246 patients (RMN = 1475; MCN = 1771). Compared to MCN, RMN was associated with reduced major peri-procedural complications (relative risk [RR] 0.51; 95% CI, 0.39–0.66), although differences were not statistically significant (p = 0.37). RMN was associated with reduced fluoroscopy time (MD −15.7 minutes; 95% CI, −22.0–−9.3) and procedure duration (MD −19.3 minutes; 95% CI, −24.7–−13.9), but differences were not statistically significant (p = 0.07 and p = 0.09 respectively).

Conclusions: RMN was associated with reduced peri-procedural complications and fluoroscopy exposure during AF ablation, albeit with longer procedure duration. However, freedom from AF at follow-up was not improved with the use of RMN.