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EFFECTS OF ATORVASTATIN APPLICATION ON ATRIAL HIGH RATE EPISODES IN DUAL-CHAMBER PACED PATIENTS WITH HYPERTENSION

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Objectives To determine the effectiveness of atorvastatin treatment on reducing the occurrence of AHREs (atrial high rate episodes, recorded by pacemakers) in Sick sinus syndrome (SSS) patients with hypertension after dual-chamber pacemaker implantation.

Methods 49 SSS patients with hypertension and accepted treatment of dual-chamber pacemaker implantation were enrolled in this study and were divided into treatment and control groups for the follow-up of 12 months. Patients in the control group (n=25) were treated with standard therapy practices after dual-chamber pacemaker implantation while patients in the treatment group (n=24) took atorvastatin at a dosage of 20 mg/day combined with standard therapy practices until the end of the study. The levels of C-reactive protein were examined at baseline and after the follow-up. During the visits, the pacemaker memories were recorded. The frequency of AHREs (times/year, those that were longer than 5 min were recorded), the duration of the AHREs (h/year), the percentage of atrial pace-making (AP%) and the percentage of ventricular pace-making (VP%) were recorded. The SPSS 16.0 software package was used for statistical analysis.

Results (1) The times and duration of AHREs in the treatment group was significantly smaller than what was observed in the control group ($p<0.05$). Comparisons of AP% and VP% between groups did not show significant difference. (2) At the end of follow-up, hsCRP levels in treatment group showed a marked decrease compared to those in the control group ($p<0.05$). (3) HsCRP level during follow-up respectively correlated well with AHREs times and AHREs duration.

Conclusions (1) Atorvastatin can decrease the frequency and duration of AHREs after dual-chamber pacemaker implantation, it is possible that the mechanism may have a relationship to the anti-inflammatory actions of statins. (2) HsCRP levels during follow-up correlate well with occurrence of AHREs.