Purpose: To estimate predictive power of nonlinear dynamic methods in terms of tachyarrhythmia recurrence in patients (pts) who underwent radiofrequency ablation (RFA) of typical atrial flutter (afl).

Materials and Methods: Twenty-one paroxysmal typical afl pts (4 women), 43±10.6 years of age, were included in the study. Arrhythmia duration was 6.3±5.4 years. Seventeen (81%) were still out of arrhythmia at a midterm follow-up. The quantitative characteristics of chaos we used were the following: parameters of informational dimension, fractal dimension (DF) and Lapunov’s parameter.

Results: Twenty-one paroxysmal typical afl pts (4 women), 43±10.6 years of age, were included in the study. Arrhythmia duration was 6.3±5.4 years. Seventeen (81%) were still out of arrhythmia at a midterm follow-up. The quantitative characteristics of chaos we used were the following: parameters of informational dimension, fractal dimension (DF) and Lapunov’s parameter.

Conclusion: Nonlinear dynamic methods seem to be superior to HRV measurements in predicting arrhythmia recurrence in post-RFA typical atrial flutter patients.

[Box & Whisker Plot with data for baseline, 24 hrs, 2 mos, baseline, 24 hrs, 6 mos showing the variability of fractal dimension (DF) and AFL recurrence pt.]

**Intervention:** Noncontact mapping in our study proved to be an effective and safe method for radiofrequency ablation of postincisional atrial tachycardia.

**Methods and Results:** In three patients (age 33 ± 10 years; 3 women) with postincisional tachycardia after correction of atrial septal defect, radiofrequency catheter ablation was performed using noncontact mapping. We created three-dimensional electroanatomical map of the right atrium during the tachycardia. Electrophysiological data were collected. We observed one area electroactive in right atrial atrium corresponding to the anatomical scar from surgical atrioectomy in all patients, the reentrant circuit between the lower border of atrioventricular node and appendiceal segment close to the inferior vena cava in one patient and the tachycardia circuit around the atrioventricular scar in two patients. The radiofrequency application (8 ± 3) guided by the noncontact mapping terminated the tachycardia.

Conclusions: Noncontact mapping in our study proved to be an effective and safe method for radiofrequency ablation of postincisional atrial tachycardia.