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## RADIOFREQUENCY ABLATION FOUND MORE EFFECTIVE THAN AMIODARONE FOR TREATMENT OF ATRIAL FLUTTER

There is no published randomized study comparing amiodarone therapy and radiofrequency catheter ablation (RFA) after only 1 episode of symptomatic atrial flutter (AFL). The aim of the Loire-Ardeche-Drome-Isere-Puy-de-Dome (LADIP) Trial of Atrial Flutter was 2-fold: (1) to prospectively compare first-line RFA (group I) versus cardioversion and amiodarone therapy (group II) after only 1 AFL episode; and (2) to determine the impact of both treatments on the long-term risk of subsequent atrial fibrillation (AF).

From October 2002 to February 2006, 104 patients (aged 78+/-5 years; 20 women) with AFL were included, with 52 patients in group I and 52 patients in group II. The cumulative risk of AFL or AF was interpreted with the use of Kaplan-Meier curves and compared by the log-rank test. Clinical presentation, echocardiographic data, and follow-up were as follows: age (78.5+/-5 versus 78+/-5 years), history of AF (27% versus 21.6%); structural heart disease (58% versus 65%), left ventricular ejection fraction (56+/-14% versus 54.5+/-14%), left atrial size (43+/-7 versus 43+/-6 mm), mean follow-up (13+/-6 versus 13+/-6 months; P=NS), recurrence of AFL (3.8% versus 29.5%; P<0.0001), and occurrence of significant AF beyond 10 minutes (25% versus 18%; P=0.3). Five complications (10%) were noted in group II (sick sinus syndrome in 2, hyperthyroidism in 1, and hypothyroidism in 2) and none in group I (0%) (P=0.03). RFA should be considered a firstline therapy even after the first episode of symptomatic AFL. There is a better long-term success rate, the same risk of subsequent AF and fewer secondary effects.

*Da Costa A, Thevenin J, Roche F, Romeyer-Bouchard C, Abdellaoui L, Messier M, et al. Results from the Loire-Ardeche-Drome-Isere-Puy-de-Dome (LADIP) trial on atrial flutter, a multicentric prospective randomized study comparing amiodarone and radiofrequency ablation after the first episode of symptomatic atrial flutter. Circulation. 2006 Oct 17;114(16):1676-81. Epub 2006 Oct 9.*

### Comment:

The common form of atrial flutter involves a macro-reentrant circuit within the right atrium. Rhythm control strategies involve antiarrhythmic drugs and radiofrequency ablation. The Loire-Ardeche-Drome-Isere-Puy-de-Dome (LADIP) trial compared Amiodarone with radiofrequency ablation after the first episode of atrial flutter.

Although radiofrequency catheter ablation is highly effective in the treatment of common atrial flutter, it is generally considered only after antiarrhythmic drug therapy has failed. The LADIP investigators have shown that when compared with Amiodarone, radiofrequency ablation has a superior efficacy in the treatment of atrial flutter. Furthermore, there were a significant number of drug side effects in the Amiodarone group and no complications in the ablation arm.

One very important aspect to recognize in the management of atrial flutter is that a significant percent of patients with atrial flutter will go on to develop atrial fibrillation. In this study, there was a similar risk in the development of atrial fibrillation between treatment groups.

In summary, radiofrequency ablation should be considered first-line therapy for the treatment of the common form of atrial flutter. Compared with Amiodarone, there is superior long-term success, the same risk for subsequent atrial fibrillation and there are fewer side effects.

For those patients who go on to develop atrial fibrillation, consideration can be given for complex atrial fibrillation radiofrequency ablation versus antiarrhythmic drug therapy.

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