

Clinical trials of rate control

TrialResults-center www.trialresultscenter.org

1 atrial fibrillation

Trial	Treatments	Patients	Trials design and methods
rate control vs electrical cardioversion			
Hot cafe (rate vs rythm control) , 2004 n=101/104 follow-up: 1.7 y	rate control (beta-blockers, digitalis, calcium antagonists or atrioventricular node ablation/modification with or without pacemaker implantation versus Cardioverted using internal or external cardioversion and then given prophylactic anti-arrhythmic drugs	patients with persistent atrial fibrillation	Parallel groups open
RACE (rate vs rythm control) , 2002 n=256/266 follow-up: 2.3 y	Rate control (rate slowing medication and anticoagulation versus Rhythm control: serial cardioversions and antiarrhythmic drugs and oral anticoagulants	patients with persistent atrial fibrillation after a previous electrical cardioversion	Parallel groups open
STAF (rate vs rythm control) , 2003 n=100/100 follow-up: 1.6 y	rate control and anticoagulants (or antithrombotics) versus Direct current cardioversion with drugs to maintain sinus rhythm	patients with persistent atrial fibrillation	Parallel groups open
rate control vs pharmacological cardioversion			
AFFIRM (rate vs rythm control) , 2002 [NCT00000556] n=2027/2033 follow-up: mean 3.5y	necessaryrate control - beta-blockers, calcium-channel blockers, digoxin or combination of these drug. versus rhythm control - the antiarrhythmic drugs used included amiodarone, disopyramide, flecainide, moricizine, procainamide, propafenone, quinidine, sotalol, dofetilide or combinations chosen by the treating physician. cardioversion could be employed if necess	patients with recurrent atrial fibrillation and who were at least 65 years of age or who had other risk factors for stroke or death	Parallel groups open

continued...

Trial	Treatments	Patients	Trials design and methods
PIAF (rate vs rhythm control) , 2000 n=125/127 follow-up: 12 months	rate control - diltiazem 90mg BD/TDS and additional therapy at the discretion of the treating physician all patients were anticoagulated throughout the study period versus rhythm control - amiodarone (600mg for 3 weeks, 200mg maintenance) for pharmacological cardioversion followed if necessary by electrical cardioversion	patients with with chronic atrial fibrillation	Parallel groups open
AF-CHF (rate vs rhythm control) , 2002 [NCT00597077] n=694/682 follow-up: 37 months	control of the ventricular rate (rate control) versus maintenance of sinus rhythm (rhythm control)	patients with a left ventricular ejection fraction of 35% or less, symptoms of congestive heart failure, and a history of atrial fibrillation	Parallel groups open
lenient rate control vs strict rate control			
RACE II , 2010 [NCT00392613] n=311/303 follow-up: 3 y	lenient rate control (target resting HR <110 bpm) versus strict rate control (target resting HR <80 bpm, and <110 bpm with moderate exercise)	patients with permanent atrial fibrillation	Parallel groups open the Netherlands

More details and results :

- antiarrhythmic drugs for atrial fibrillation in rate control at <http://www.trialresultscenter.org/go-Q273>
- rate control for atrial fibrillation in all type of patients at <http://www.trialresultscenter.org/go-Q400>

References

Hot cafe (rate vs rhythm control), 2004:

Opolski G, Torbicki A, Kosior DA, Szulc M, Wozakowska-Kaplon B, Kolodziej P, Achremczyk P Rate control vs rhythm control in patients with nonvalvular persistent atrial fibrillation: the results of the Polish How to Treat Chronic Atrial Fibrillation (HOT CAFE) Study. Chest 2004 Aug;126:476-86 [15302734]

RACE (rate vs rhythm control), 2002:

Van Gelder IC, Hagens VE, Bosker HA, Kingma JH, Kamp O, Kingma T, Said SA, Darmanata JI, Timmermans AJ, Tijssen JG, Crijns HJ A comparison of rate control and rhythm control in patients with recurrent persistent atrial fibrillation. N Engl J Med 2002 Dec 5;347:1834-40 [12466507]

STAF (rate vs rhythm control), 2003:

Carlsson J, Miketic S, Windeler J, Cuneo A, Haun S, Micus S, Walter S, Tebbe U Randomized trial of rate-control versus rhythm-control in persistent atrial fibrillation: the Strategies of Treatment of Atrial Fibrillation (STAF) study. J Am Coll Cardiol 2003;41:1690-6 [12767648]

AFFIRM (rate vs rythm control), 2002:

Wyse DG, Waldo AL, DiMarco JP, Domanski MJ, Rosenberg Y, Schron EB, Kellen JC, Greene HL, Mickel MC, Dalquist JE, Corley SD A comparison of rate control and rhythm control in patients with atrial fibrillation. N Engl J Med 2002;347:1825-33 [[12466506](#)]

PIAF (rate vs rythm control), 2000:

Hohnloser SH, Kuck KH, Lilienthal J Rhythm or rate control in atrial fibrillation–Pharmacological Intervention in Atrial Fibrillation (PIAF): a randomised trial. Lancet 2000;356:1789-94 [[11117910](#)]

AF-CHF (rate vs rythm control), 2002:

Roy D, Talajic M, Nattel S, Wyse DG, Dorian P, Lee KL, Bourassa MG, Arnold JM, Buxton AE, Camm AJ, Connolly SJ, Dubuc M, Ducharme A, Guerra PG, Hohnloser SH, Lambert J, Le Heuzey JY, O'Hara G, Pedersen OD, Rouleau JL, Singh BN, Stevenson LW, Stevenson WG, Rhythm control versus rate control for atrial fibrillation and heart failure. N Engl J Med 2008 Jun 19;358:2667-77 [[18565859](#)]

RACE II, 2010:

Van Gelder IC, Groenveld HF, Crijns HJ, Tuininga YS, Tijssen JG, Alings AM, Hillege HL, Bergsma-Kadijk JA, Cornel JH, Kamp O, Tukkie R, Bosker HA, Van Veldhuisen DJ, Van den Berg MP Lenient versus Strict Rate Control in Patients with Atrial Fibrillation. N Engl J Med 2010 Mar 15;: [[20231232](#)] [10.1056/NEJMoa1001337](#)

Van Gelder IC, Van Veldhuisen DJ, Crijns HJ, Tuininga YS, Tijssen JG, Alings AM, Bosker HA, Cornel JH, Kamp O, Veeger NJ, Volbeda M, Rienstra M, Ranchar AV, TenVergert EM, Van den Berg MP RAtE Control Efficacy in permanent atrial fibrillation: a comparison between lenient versus strict rate control in patients with and without heart failure. Background, aims, and design of RACE II. Am Heart J 2006 Sep;152:420-6 [[16923407](#)]