Clinical trials of captopril

TrialResults-center www.trialresultscenter.org

1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
captopril vs placebo			
Bussmann , 1992 n=22/24 follow-up: 48h	slow intravenous bolus injection of 2.5 or 5.0 mg captopril followed by a continuous infusion of 1.5-2.0 mg/h for a period of 48 hours versus placebo	patients with acute myocardial infarction	Parallel groups double blind
SAVE , 1992 n=1115/1116 follow-up: 3.5y	Captopril 125 mg initial dose, up to 2550 mg three times daily versus placebo	patient within 316 days of a MI, LVEF <40%	Parallel groups double blind
CATS , 1996 n=149/149 follow-up: 1 year	captopril 25 mg three times a day versus placebo	patients with a first anterior myocardial infarction treated with intravenous streptokinase within 6h of onset of symptoms	Parallel groups double blind The Netherlands
CCS-1 , 1995 n=13634 follow-up: 1 month	captopril6.25 mg initial dose, 12.5 mg 2 h later, and then 12.5 mg three times daily for 28 days versus placebo	Acute MI <36h of MI	Parallel groups double blind China
Di Pasquale , 1997 n=31/30 follow-up: 12h	captopril first dose 2-4 h after starting thrombolysis (the dose was then increased up to 25 mg every 8 h versus placebo	patients hospitalized for suspected anterior AMI within 4 h from the onset of symptoms suitable for thrombolysis	Parallel groups double blind italy
Pfeffer , 1988 n=38 follow-up: 1 year	Captopril versus placebo	patient within 11-31 days after MI, LVEF<=45% , not in overt congestive heart failure	Parallel groups double blind
Di Pasquale , 1994 n=188/183 follow-up: 2h	captopril, 6.25 mg, orally 15 min before thrombolysis versus placebo before thrombolysis	patients with acute myocardial infarction , hospitalized within 4 h of the onset of symptoms	Parallel groups double blind Italy

continued...

Trial	Treatments	Patients	Trials design and methods
Sogaard , 1994 n=58 follow-up: 6 months	Captopril 50mg daily versus placebo	patients with left ventricular (LV) dysfunction on day 7 after MI	Parallel groups double blind
ECCE , 1997 n=104/104 follow-up: 1 month	captopril titrated dose in order to preserve their blood pressure versus placebo	patients with acute myocardial infarction	Parallel groups double blind
Sharpe , 1988 n=60 follow-up: 1 year	Captopril 25 mg thrice a day versus placebo	patients with symptomless left ventricular dysfunction (LVEF<45%) 1 week after a myocardial infarction without clinical evidence of heart failure	Parallel groups double blind
Mortarino , 1990 n=10/11 follow-up: 2 months	Captopril 25 mg bid versus placebo	patient with mild congestive heart failure after recent MI	Parallel groups double blind
French , 1999 n=243/250 follow-up: 1 year	captopril 6.25 mg, increasing to 50 mg t.d.s. versus placebo	patients aged <or = 75 years with first infarctions, presenting within 4 h of symptom onset	Parallel groups double blind New Zealand
Galcera , 1993 n=21/22 follow-up: 14 days	captopril versus placebo	patients with a first acute myocardial infarction and a pulmonary capillary pressure equal or above 17 mmHg	Parallel groups double blind
Hargreaves , 1992 n=36/36 follow-up: 28 days	12.5 mg of captopril three times daily versus placebo	patients with acute myocardial infarction (systolic blood pressure >90 mm Hg) within 24 hours of the start of pain	Parallel groups double blind UK
ISIS-4 , 1995 n=29028/29022 follow-up: 1 month	captopril 6.25mg twice daily initialy titrated up to 50 mg twice daily (for 1 month) versus placebo	Acute MI <24h of MI, no cardiogenic shock or persistent severe hypotension	Factorial plan double blind 31 countries
Nabel , 1991 n=20/18 follow-up: 3 months	intravenous followed by oral captopril versus placebo	patients with myocardial infarction	Parallel groups double blind
Ray , 1993 n=99 follow-up: 1 year	captopril 25 mg three times a day versus placebo	haemodynamically stable patients with acute myocardial infarction, selected on clinical grounds as being at risk of late ventricular dilatation	Parallel groups double blind Glasgow
Sharpe , 1991 n=100 follow-up: 3 months	captopril 50 mg twice daily versus placebo	patients with Q wave myocardial infarction, but without clinical heart failure 24-48h after onset of symptoms	Parallel groups double blind

continued...

Trial	Treatments	Patients	Trials design and methods
captopril or enalapril vs placebo			
PRACTICAL (captopril) , 1994 n=150/75 follow-up: 1 year	captopril 25 mg three times daily or enalapril 5 mg three times daily versus placebo	patients with acute myocardial infarction within 24 hours of onset	Parallel groups double blind

More details and results :

- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in systematic early treatment (with or without sign of HF) at http://www.trialresultscenter.org/go-Q145
- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in patients with or without HF at http://www.trialresultscenter.org/go-Q146
- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in patients with left ventricular dysfunction after MI at http://www.trialresultscenter.org/go-Q147

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2 hypertension

Trial	Treatments	Patients	Trials design and methods
captopril or atenolol vs control			
UKPDS 38 , 1998 n=758/390 follow-up: 8.4y (median)	tight control of blood pressure aiming at a BP <150/85 (with the use of captopril or atenolol as main treatment, other treatment were added if the control criteria were not met) versus less tight control aiming at a blood pressure of <180/105 (avoiding treatment with ACE inhibitors or beta-blockers)	hypertensive patients with type 2 diabetes	Parallel groups open UK
captopril vs atenolol			
UKPDS 39 , 1998 n=400/358 follow-up: ND	captopril 25 mg/d aiming at a BP <150/85 versus atenolol 50mg/d aiming at a BP <150/85	hypertensive patients with type 2 diabetes	Parallel groups open UK
Valsartan + captopril vs Captopril			
VALIANT/Val+Cap , 2003 n=4885/4909 follow-up: 2.1 y	Valsartan + captopril versus Captopril	patients with myocardial infarction complicated by left ventricular systolic dysfunction, heart failure, or both	Parallel groups double-blind

continued...

Trial	Treatments	Patients	Trials design and methods
captopril vs diuretic and/or beta-blockers			
CAPP (diabetic subgroup) , 1999 n=309/263 follow-up: 6.1 year	Captopril initial dose of 50 mg daily given in one or two doses versus thiazide diuretic or beta-blocker	Patients aged 25-66 years with a measured diastolic blood pressure of 100 mm Hg or more on two occasions; subgroup of diabetic patients	Parallel groups open with blinded assessment Sweden, Finland
captopril vs diuretic or beta-blocker			
CAPPP , 1999 n=5492/5493 follow-up: 6.1 y	captopril 50mg/d versus beta-blocker (not specified) or diuretic (not specified)	Patients aged 2566 years with a measured diastolic bloodpressure of 100 mm Hg or more on two occasions	Parallel groups Open Sweden and Finland
UKPDS-HDS , 1998 n=400/358 follow-up: 84 y	captopril started at 25mg twice daily up to 50 mg twice dialy (target blood pressure of <150/<85 mmHG) versus atenolol started at 50mg daily up to 100mg if required(target blood pressure of <150/<85 mmHG)	HBP+DM	Parallel groups Open England, Scotland, and Northern Ireland

More details and results :

- anti hypertensive agents for hypertension in diabetic patients at http://www.trialresultscenter.org/go-Q10
- anti hypertensive agents for hypertension in all type of patient at http://www.trialresultscenter.org/go-Q13
- angiotensin-receptor blockers for hypertension in all diseases requiring ACEi (HF, CHD, HT,...) at http://www.trialresultscenter.org/go-Q125

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3 heart failure

Trial	Treatments	Patients	Trials design and methods
captopril vs placebo			
SAVE , 1992 n=1115/1116 follow-up: 3.5y	Captopril 125 mg initial dose, up to 2550 mg three times daily versus placebo	patient within 316 days of a MI, LVEF <40%	Parallel groups double blind

continued...

Trial	Treatments	Patients	Trials design and methods
Barabino , 1991 n=52/49 follow-up: 6 months	captopril (37.5-75 mg/day) versus placebo	old patients (>75y) under treatment with digitalis and/or diuretics	double blind
Pfeffer , 1988 n=38 follow-up: 1 year	Captopril versus placebo	patient within 11-31 days after MI, LVEF<=45% , not in overt congestive heart failure	Parallel groups double blind
Bussmann , 1987 n=12/11 follow-up: 6 months	captopril versus placebo	patients with severe heart failure (NYHA classes III and IV) on treatment with digitalis and diuretics	Parallel groups double blind
Sogaard , 1994 n=58 follow-up: 6 months	Captopril 50mg daily versus placebo	patients with left ventricular (LV) dysfunction on day 7 after MI	Parallel groups double blind
Captopril Digoxin Multicenter Research Group , 1988 n=104/100 follow-up:	captopril versus placebo	patients with mild to moderate heart failure	double blind
Sharpe , 1988 n=60 follow-up: 1 year	Captopril 25 mg thrice a day versus placebo	patients with symptomless left ventricular dysfunction (LVEF<45%) 1 week after a myocardial infarction without clinical evidence of heart failure	Parallel groups double blind
Mortarino , 1990 n=10/11 follow-up: 2 months	Captopril 25 mg bid versus placebo	patient with mild congestive heart failure after recent MI	Parallel groups double blind
Cilazapril-Captopril Multi-centre Group (capt vs pbo) , 1995 n=108/114 follow-up: 12 weeks	cilazapril 1-2.5 mg once daily versus placebo	patients with chronic heart failure (New York Heart Association classes II-IV)	Parallel groups double blind
CMRG , 1983 n=50/42 follow-up: 12 weeks	captopril versus placebo	patients with heart failure refractory to digitalis and diuretic therapy	double blind
Magnani , 1986 n=48/46 follow-up: 1 year	captopril 25 mg t.i.d. versus placebo	patients on digitalis treatment for chronic congestive heart failure (NYHA class II-III)	double blind
Magnani , 1990 n=16/16 follow-up:	captopril versus placebo	patients with congestive heart failure	Cross over double blind

continued...

Trial	Treatments	Patients	Trials design and methods
Munich MHFT (Kleber) , 1992 n=83/87 follow-up: 2.7y (median)	captopril 25 mg twice a day versus placebo	patients with congestive heart failure New York Heart Association (NYHA) functional class I-III on standard treatment	Parallel groups Double blind Germany
spironolactone+captopril vs captopril			
Han , 1994 n=19/16 follow-up: 4 weeks	captopril plus spironolactone versus captopril alone	patients with refractory CHF and New York Heart Association functional class IV without renal dysfunction, hypotension and hyperkalemia	open China
captopril vs enalapril			
packer , 1986 n=21/21 follow-up: 1-3 months	captopril 150 mg/d versus enalapril 40mg/d	patient with severe chronic heart failure	Parallel groups open

More details and results :

- angiotensin-Converting Enzyme Inhibitors for heart failure in all type of heart failure at http://www.trialresultscenter.org/go-Q43
- angiotensin-Converting Enzyme Inhibitors for heart failure in elderly at http://www.trialresultscenter.org/go-Q71
- diuretics for heart failure in all type of patients at http://www.trialresultscenter.org/go-Q75
- angiotensin-Converting Enzyme Inhibitors for heart failure in MI patients with LV dysfunction without clinical evidence of HF at http://www.trialresultscenter.org/go-Q238
- aldosterone blockade for heart failure in all type of patients at http://www.trialresultscenter.org/go-Q488

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4 diabetes type 2

Trial	Treatments	Patients	Trials design and methods
captopril or atenolol vs control			
UKPDS 38 , 1998 n=758/390 follow-up: 8.4y (median)	tight control of blood pressure aiming at a BP <150/85 (with the use of captopril or atenolol as main treatment, other treatment were added if the control criteria were not met) versus less tight control aiming at a blood pressure of <180/105 (avoiding treatment with ACE inhibitors or beta-blockers)	hypertensive patients with type 2 diabetes	Parallel groups open UK
captopril vs atenolol			
UKPDS 39 , 1998 n=400/358 follow-up: ND	captopril 25 mg/d aiming at a BP <150/85 versus atenolol 50mg/d aiming at a BP <150/85	hypertensive patients with type 2 diabetes	Parallel groups open UK
captopril vs diuretic and/or beta-blockers			
CAPP (diabetic subgroup) , 1999 n=309/263 follow-up: 6.1 year	Captopril initial dose of 50 mg daily given in one or two doses versus thiazide diuretic or beta-blocker	Patients aged 25-66 years with a measured diastolic blood pressure of 100 mm Hg or more on two occasions; subgroup of diabetic patients	Parallel groups open with blinded assessment Sweden, Finland

More details and results :

- anti hypertensive agents for diabetes type 2 in patients with hypertension at http://www.trialresultscenter.org/go-Q83
- anti hypertensive agents for diabetes type 2 in patients with or without hypertension at http://www.trialresultscenter.org/go-Q414
- angiotensin renin system blockade for diabetes type 2 in all type of patients at http://www.trialresultscenter.org/go-Q438

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Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 38. UK Prospective Diabetes Study Group. BMJ 1998;317:703-13 [9732337]

UKPDS 39, 1998:

Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 38. UK Prospective Diabetes Study Group. BMJ 1998;317:703-13 [9732337]

Efficacy of atenolol and captopril in reducing risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 39. UK Prospective Diabetes Study Group. BMJ 1998;317:713-20 [9732338]

CAPP (diabetic subgroup), 1999:

Hansson L, Lindholm LH, Niskanen L, Lanke J, Hedner T, Niklason A, Luomanmki K, Dahlf B, de Faire U, Mrlin C, Karlberg BE, Wester PO, Bjrck JE Effect of angiotensin-converting-enzyme inhibition compared with conventional therapy on cardiovascular morbidity and mortality in hypertension: the Captopril Prevention Project (CAPPP) randomised trial. Lancet 1999;353:611-6 [10030325]

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Entry terms: spironolactone, Veroshpiron, Verospirone, Spiractin, Spirobeta, Spirogamma, Spirolang, Spirono-Isis, Spirono Isis, Spironone, Spirospare, Verospiron, Aldactone, Aldactone A, Aquareduct, duraspiron, Espironolactona Alter, Espironolactona Mundogen, Flumach, Frumikal, Jenaspiron, Novo-Spiroton, Novo Spiroton, NovoSpiroton, Practon, Spiro L.U.T., spiro von ct, , SQ-14534, SQ 14534, SQ14534, SQ-14225, SQ 14225, SQ14225, Capoten, Lopirin,